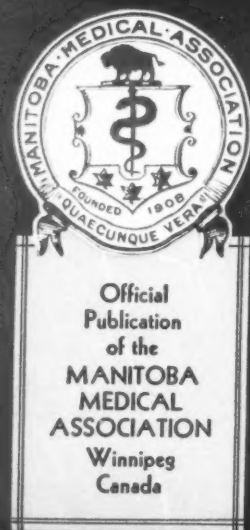


Manitoba Medical Review



Vol. 37

No. 4

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Wednesday Evening — April 24, 1957

9.00 Reception for visiting Doctors and their Wives.

Thursday Morning — April 25, 1957

Presiding Officer Dr Bradley

- 8.30 Registration.
All Technical Exhibits Open.
Medical Film.
- 9.00 President's Address, Dr. Wasylenki.
- 9.05 Foreword, Dr. Sinclair, General Chairman.
- 9.10 Modern Treatment of Hypertension.
Walter F. Kvale, M.D., Mayo Clinic.
- 9.50 Tranquilizing Agents for Nervous Diseases
in General Practice,
Burtrum C. Schiele, M.D., University of
Minnesota.
- 10.30 Recess, Visit Exhibits.
- 11.00 Management of Common Fractures in
General Practice,
Angus D. McLachlin, M.D., University of
Western Ontario.
- 11.40 Questions and Discussion.

Friday Morning — April 26, 1957

Third Scientific Session

Presiding Officer Dr. Allen

- 8.30 Medical Film.
- 9.00 Uterine Haemorrhage Including Problem
of Afibrinogenemia,
Edwin M. Robertson, M.B. C.H.B.,
Queen's University.
- 9.40 Abdominal Emergencies,
Angus D. McLachlin, M.D.,
University of Western Ontario.
- 10.20 Recess — Visit Exhibits.
- 10.50 Mental Problems of Ageing,
Burtrum C. Schiele, M.D.,
University of Minnesota.
- 11.30 Questions and Discussion
- 12.15 Luncheon—Presiding Officer, Dr. LeBoldus.
Speaker, Dean McLeod.

12.30 Luncheon.

Presiding Officer, Dr. Sinclair.

Address of Welcome, Premier and Mayor.

Speaker: Dr. Jack McKenty, President of
College of General Practice of Canada.

Thursday Afternoon — April 25, 1957

Second Scientific Session

Presiding Officer Dr. Mesbur

- 2.15 Chronic Occlusive Arterial Disease,
Walter F. Kvale, M.D., Mayo Clinic.
- 2.55 Treatment of Cardiac Emergencies,
Max G. Israels, Director of Education,
Regina General Hospital.
- 3.15 Questions and Discussion.
- 3.30 Exhibits.
- 3.45 Business Meeting.
Medical Film.
- 6.30 Cocktail Hour — Doctors and Wives.
- 7.30 Buffet Dinner — Doctors and Wives.
- 9.30 Shriners' Hall — Entertainment.

Friday Afternoon — April 26, 1957

Fourth Scientific Session

Presiding Officer Dr. Bean

- 2.00 Diarrhoea in Infancy,
Dr. W. Gerrard, M.D.,
University of Saskatchewan.
- 2.40 Office Diagnosis of Gynecological Cancer,
Edwin M. Robertson, M.B. C.H.B.,
Queen's University.
- 3.20 Questions and Discussion.
- 3.40 Recess — Visit Exhibits.
- 4.00 Business Meeting.
Medical Films.
- 6.30 Reception — Doctors and Wives.
- 7.30 Banquet and Dance.
Presiding Officer, Dr. Wasylenki.
Speaker:

Saturday Morning — April 27, 1957

Fifth Scientific Session

Presiding Officer Dr. LeBlond

- 8.30 Medical Film.
- 9.00 Management of Pruritis Ani,
A. K. Roy, M.D., Medical Arts Clinic.
- 9.20 General Practitioner's Office as a Cancer
Detection Centre,
A. J. S. Bryant, M.D., Director,
Saskatchewan Cancer Clinic.
- 9.40 Respiratory Infections in Children,
John W. Gerrard, M.D.
- 10.20 Visit Exhibits — Coffee Break.
- 10.50 Surgical Management of Diabetic Foot,
Angus D. McLachlin, M.D.,
University of Western Ontario.
- 11.30 Questions and Discussion.

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No. 4

Surgery

The Modern Management of the Arteriosclerotic Leg

Josephus C. Luke, M.D., F.R.C.S. (Eng.)
F.R.C.S. (C), F.A.C.S.

Arteriosclerosis is undoubtedly the most widely prevalent condition affecting the human race. Every individual over fifty years of age has this lesion to some extent, but persons in their thirties are not immune. The results of this process are the greatest single cause of death and directly contributes to untold disability. The reasons for its development are not fully known, but there is general agreement on the fact that familial predisposition is important. Some unknown defect in fat metabolism plays a large part and accounts for the lipid deposits in the media and subintimal layers of major arteries. Arterial stress points such as vessels close to major bifurcations will usually show the disease earlier than in other areas. As the cause of this involvement is not known, and the prophylaxis therefore nil, all we as physicians can do at the present time is to treat the various manifestations of this disease as they arrive. It should be emphasized that this disease is a generalized one with all its ramifications from head to toe and that, before treatment is commenced, a thorough assessment of the patient is required.

It is our custom to admit those whose symptoms warrant treatment, to Hospital for investigation where their local and general status is checked. Along with the routine history, physical examination and laboratory work, the following tests will give special information: blood sugars and N.P.N., electrocardiogram, blood cholesterol, examination of the fundi and arteriography. With this information at hand one can determine the appropriate therapy. My approach to the ischemic leg is a surgical one where possible, because of the dramatic results compared to conservative management. Unfortunately the majority of cases are unsuitable for the existing surgical techniques and only conservative measures are indicated.

Medical Management

The following are the basis of medical management. If infection, incipient or actual gangrene is present the patient should be in bed with no weight bearing allowed. The head of the entire bed should be raised six to eight inches, as blood

flow to the foot will be improved if the leg is slightly dependent. Moist dressings should not be used on any ischemic area and local heat to the part is absolutely contraindicated. Medical measures to improve collateral circulation include ethyl alcohol, vasodilator drugs, Buerger's exercises and reflex vasodilation. This latter technique is probably the best where warming of the trunk or upper extremities to 115°F for a half hour four times a day stimulates the vasomotor center to emit vasodilator impulses to the entire body. Many other methods of therapy have been advocated but which we have tried and found wanting. Amongst these are the Pavex boot intermittent venous occlusion, intravenous saline and ether, and a host of drugs. It should not be necessary to add that care of the ischemic foot should be meticulous, and I like to emphasize this point in preventing ischemic sequelae by comparing it to the well known paint advertisement "Save the surface and you save all."

Surgical Measures

As mentioned above, surgical therapy in the suitable case gives major alleviation or complete relief of the ischemia and is to be preferred providing the following criteria are met: 1) Is the degree of arterial involvement such that a good surgical result is likely? 2) Is the patient suitable for surgery in respect to his mental and physical condition? 3) Is there trained personnel with all the modern aids such a vessel grafts available.

Techniques

Lumbar sympathectomy has been an accepted procedure for the past fifteen years. By removal of the first, second and third lumbar ganglia, the vasoconstrictor impulses to the leg as far as the groin can be removed giving twenty-four hour a day vasodilatation. However this vasodilatation applies only to the collateral vessels which are functioning, and has no effect on opening up the occluded main artery. Consequently the result gives only the ultimate in medical therapy and so leaves a lot to be desired. We are still doing sympathectomies, but much fewer than three years ago because of the newer techniques of arterial grafting and thromboendarterectomy. At the present time we will do a lumbar sympathectomy in the case complaining of intermittent claudication whose occlusive disease is in or beyond the popliteal artery, or the case who has an ischemic lesion of the foot which is not suitable for arterial grafting, but where preliminary lumbar sympathetic procaine block reveals that some vasodilatation of the collateral vessels is still possible. Minor

*From the Surgical Service, Royal Hospital, Montreal.

amputations are frequently done at the same time as the sympathectomy.

As has been mentioned, the ideal in treatment is to restore normal main vessel flow. This is achieved by the use of arterial grafts. These grafts can be of various kinds. An autogenous vein can be employed, for instance the saphenous vein to bridge a defect in the femoral artery. These veins are however more technically difficult to use, and the results therefore suffer. The best graft is that of an artery taken from another individual sterilized and stored and used when needed. An artery bank is essential to this form of surgery. These homografts can be used to replace or bypass (Fig. 1) occluded segments of main vessels with

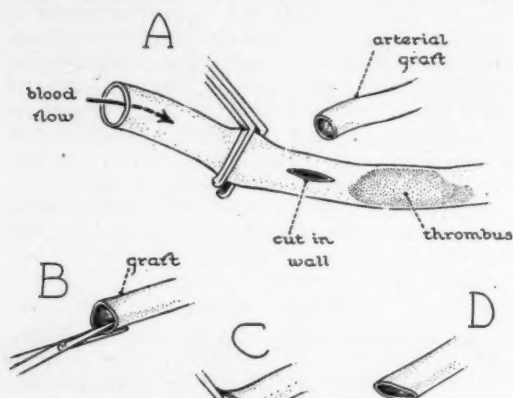


Figure 1
Technical Steps in the performance of the end-to-side bypass graft.

restoration of normal flow. It is most gratifying to the patient and surgeon alike to see the post-operative leg with restored palpable distal pulses, warmth and freedom from pain.

This technique is applicable to cases of intermittent claudication where pain on walking occurs either in the foot, calf, thigh, buttocks or back depending on the level of arterial occlusion (Fig. 1B). A successful graft gives complete relief of symptoms. One of my most appreciative patients is an elderly golf professional who could drive a ball two hundred and fifty yards, but who had to stop several times due to his claudication pain before he could reach it. He didn't dare use a golfmobile because of his prestige. A femoral bypass homograft was inserted into each thigh to restore normal circulation and he can now keep up with the youngest member of his club.

The criteria for a suitable case for this procedure are as follows: 1) Good quality femoral or aortic arteriograms revealing a segmental occlusion of a major vessel. 2) Evidence that the arteriosclerotic process is not severely widespread in the arteries under consideration. 3) Evidence that the arterial outflow distal to the occluded seg-

ment is of good quality. 4) No major arteriosclerotic manifestations in the cerebral cardiac or renal areas. 5) Availability of an arterial bank, or as second choice, plastic cloth prosthesis.

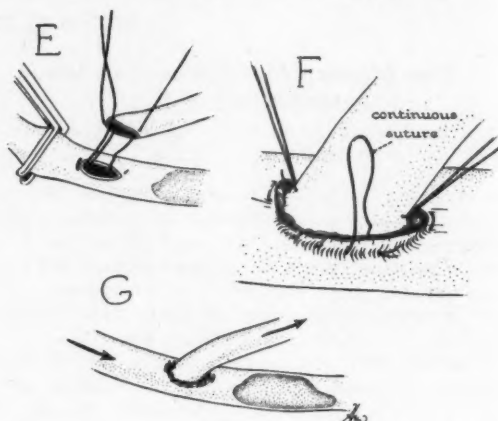


Figure 2
Segmental occlusion of the femoral artery ideally located for end-to-side bypass arterial homograft.

As one adopts routine arteriography in all cases of arterial ischemia to the leg, more and more cases of segmental occlusion amenable to surgery will be uncovered. In the past four years we have inserted sixteen saphenous autografts in femoral artery occlusion. Our success rate in functioning grafts was only fifty percent, which is insufficient to justify the procedure. During this same period we have used fifty-six aortic iliac or femoral grafts with restoration of normal arterial flow in forty-nine, a success rate of eighty-eight percent. In this group is included twelve cases who were admitted with gangrene of some part of the foot and advanced arterial disease. However, the arteriogram in these twelve showed a segmental occlusion and the grafting procedure appeared justified as a major leg amputation was the only alternative. In these persons we have ignored criterion² mentioned above because of the need to save the leg. Four of these twelve failed and went on to supracondylar amputation. However eight legs were saved with healing of the gangrene or with an associated minor amputation which allowed these elderly individuals to be self sustaining persons instead of wheel chair invalids. We feel that this is an intensely gratifying advance in therapy.

The follow-up of these fifty-six cases to date has shown four to have occluded their grafts one month to three years after operation. This unfortunately will occur in more of the cases as time goes on because their arteriosclerotic process is a gradually extending one. Two others have died of coronary disease during this period. However, until the time of recurrence of disablement or death these persons have enjoyed normal activity.

A second technique is available in these cases of segmental occlusion of major arteries. This is called thromboendarterectomy (Fig. 3) where the

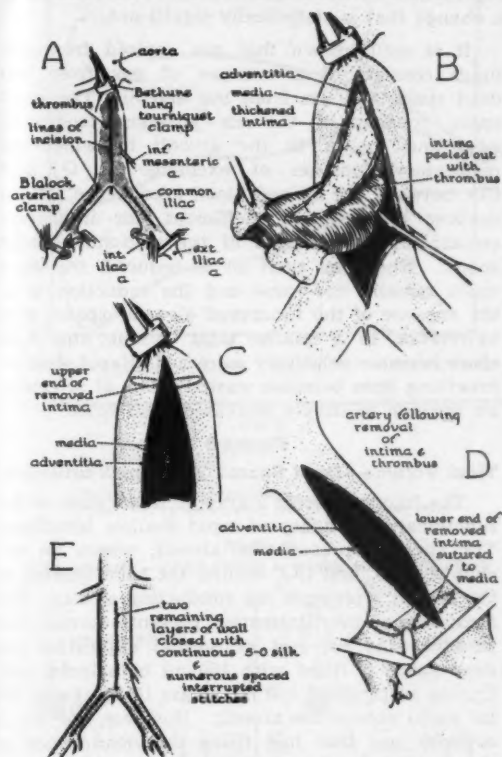


Figure 3

Technical steps in the operation of aortic and bilateral common clear thromboendarterectomy.

occluded segment of artery is incised and the thrombus, atherosclerotic debris and intima are removed. The arterial incision is then closed and flow in the repaired vessel resumed. This technique has the merit of not requiring an arterial graft, and it is a useful and successful method in certain cases. However, only major vessels such as the aorta or iliac vessels are suitable as thrombosis in smaller arteries is almost inevitable. Excessive arterial calcification renders it unsuitable and the surgeon who contemplates a thromboendarterectomy should have a suitable graft on

hand in case one of these difficulties arises. Our experience is limited to six cases of aortic and iliac thromboendarterectomy and nine cases where the iliacs only were involved. One total failure resulted leading to loss of both legs. Two have been successful in one leg and not in the other and the remainder have had marked improvement or return to normal blood flow to the legs. At the present time we will elect to do a thromboendarterectomy in a short segmental occlusion in a vessel the size of the common femoral artery or larger.

Finally, the procedure of arterial grafting is ideal for all forms of arterial aneurysms and is the only method which allows removal of the aneurysms and restoration of normal blood flow. Rupture of these aneurysms with loss of life or limb is all too common otherwise. Our experience in this respect consists of the removal and grafting of six aortic and eight peripheral aneurysms. Thirteen were successful and one died, the latter being an emergency procedure for a ruptured aortic abdominal aneurysm.

Unfortunately many cases of arteriosclerosis obliterans are admitted in a late stage or too old for definitive surgery. In others, conservative therapy is of no avail and amputation is the last resort. However, our amputation rate has declined markedly in the past year due to arterial grafting, to such an extent that the orthopedic surgeons, who look to me to provide bone for them, for their bone bank, have had extremely poor pickings. . .

Conclusion

The techniques of vascular surgery have shown a great advance in the past five years. Conservative therapy has been replaced in many cases by methods designed to restore normal blood flow to the limb, and these cases are selected by arteriograms showing segmental occlusion in major arteries. The symptoms of claudication and ischemic neuritis can be relieved and some cases of actual gangrene healed in properly selected individuals. Previously hopeless aneurysms can be excised with restoration of normal blood flow. These surgical techniques are now well accepted and will be performed in increasing numbers as the number of surgeons trained in vascular surgery increases.

Tracheotomy as an Adjunct to Abdominal Surgery

J. M. Kagan, M.D., F.R.C.S. (C)

This paper on the use of tracheotomy as an adjunct to abdominal surgery is the result of observation and study of the work of a group of surgeons on the Surgical Staff of the St. Boniface Hospital. The purpose of the paper is to explain the mechanisms by which tracheotomy helps certain patients after a laparotomy, to enumerate the indications for a tracheotomy, and to prove the advantages of a tracheotomy by a case presentation.

There are two principal complications arising in a patient subjected to a laparotomy which can be corrected by tracheotomy: namely, hypoventilation caused by rapid and shallow breathing which occurs after a laparotomy, and bronchial obstruction with consequent atelectasis and pneumonia as a result of an accumulation of excessive bronchial secretions.

Hypoventilation

In 1933, Henry K. Beecher¹ at the Massachusetts General Hospital published the results of his studies on the effect of laparotomy on respiration in an attempt to discover the origin of post-operative pulmonary complications. Sixty-four patients on whom about 4,000 measurements of pulmonary function were made, constituted the series studied. He divided the series into two groups according to sex, and further divided the male and female groups into those who were subjected to an upper abdominal operation and those who had a lower abdominal operation. The reason for the grouping was the well known fact that the incidence of post-operative pulmonary complications is much higher in men than in women, and also that it is higher after upper than lower abdominal operations. The results published in graphic form represent average figures.

Figure 1

Post-Operative Rapid Shallow Breathing

The Tidal Volume (TV) or the depth of breathing, represented by the lower line on the graph, is the volume of gas inspired or expired during a respiratory cycle. It is reduced by 20% in the first post-operative day. This average 20% reduction of tidal air is accompanied by a simultaneous rise of 20% in the Respiratory Rate (RR) as shown on the upper line on the graph. Further analysis of the data obtained showed that from the second post-operative day, upper abdominal operations in men resulted in an 11% greater reduction in tidal air than did lower abdominal operations; this greater crippling effect was maintained through the twelfth day. In females, an insignificant difference of 3% was found. This

From the Department of Surgery, St. Boniface Hospital. Presented at the Annual Meeting of the Manitoba Medical Association, October 1956.

corresponds to the greater incidence of post-operative complications in men subjected to an upper abdominal operation. The Minute Volume, represented by the middle line (MV) does not show a change that is statistically significant.

It is well known that gas expired from the lungs consists of a mixture of gas from the dead space and gas from the alveoli. The dead space consists of the air-passages from the nose and mouth to the alveoli in which no respiratory function of exchange of O_2 and CO_2 between the air and blood takes place. Rapid shallow breathing is inefficient, for it merely accomplishes ventilation of the anatomical dead space. When the tidal air is reduced, the dead space remains the same and the reduction is at the expense of the functional alveolar space; thus in relation to a smaller tidal volume, the dead space becomes relatively increased. Rapid shallow breathing then becomes wasted effort of sweeping air through relatively increased dead space.

Figure 2

Tidal Volume—Dead Space = Alveolar Ventilation²

The figure presents a graphic illustration of the functional inadequacy of rapid shallow breathing. The circles represent the alveoli, where an exchange of O_2 and CO_2 occurs; the tube leading to the alveoli represents the conducting airway. The right side of the illustration presents normal respiration. At the end of normal expiration the dead space is filled with 150 ml of alveolar gas. During inspiration, 450 ml of gas (3 blocks of 150 ml each) enters the alveoli. However, 150 ml is alveolar gas that had filled the dead space at the end of the last expiration: this, having the composition of alveolar gas, does not raise alveolar pO_2 or lower pCO_2 , and hence does not contribute to arterializing the venous blood. Two blocks of inspired gas reach the alveoli to raise alveolar pO_2 and lower pCO_2 . The remaining block of inspired gas is left in the dead space at end-inspiration and is flushed out on the next expiration, thus never entering into gas exchange.

The right side of the illustration presents hypoventilation. During inspiration, 150 ml of dead space gas enters the alveoli and the 150 ml of inspired air remains in the dead space so that alveolar ventilation is nil. This is not completely true for gas moving through conducting airways moves with a cone front and not a square front as illustrated in the diagrams so that some of the inspired air does reach the alveoli, no matter how small the tidal volume.

Thus, hypoventilation, due to rapid shallow breathing, suffered in the immediate post-operative period by the laparotomized patient is due to a diminished tidal volume with a relative increase in anatomical dead space gas and a decrease in alveolar gas. The correctable factor is the increased dead space.

Figure 1

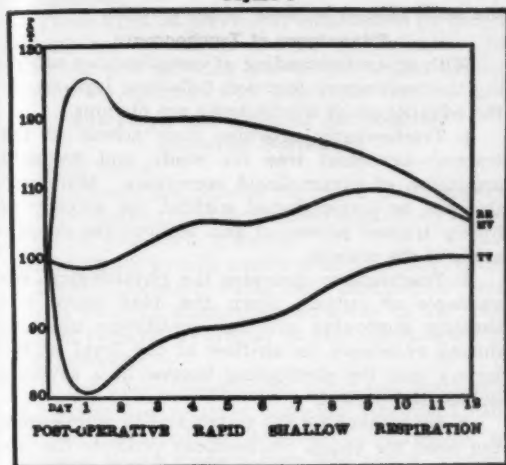


Fig. 1

RR = Respiratory rate
 MV = Minute volume
 TV = Tidal volume
 Abscissa = Days postoperative
 Ordinate = Postoperative per cent of preoperative values

Figure 2
 TIDAL VOLUME - DEAD SPACE = ALVEOLAR VENTILATION

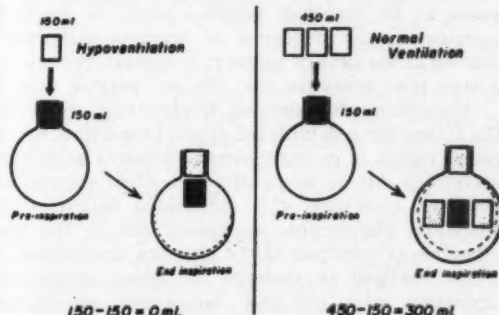


Figure 3

Respiratory Dead Space³

This figure illustrates the normal values for anatomic dead space. Note that the dead space is less in the supine than in the semi-recumbent position; also the values are larger for males and usually larger for older men. Dead space is also increased in lung diseases such as emphysema and bronchiectasis. Present values for anatomical dead space are those obtained by Fowler by measurements on the expired gas from the lungs with a continuous rapid electrical gas analyzer using a nitrogen meter. The average value is 150 ml as illustrated in this figure.

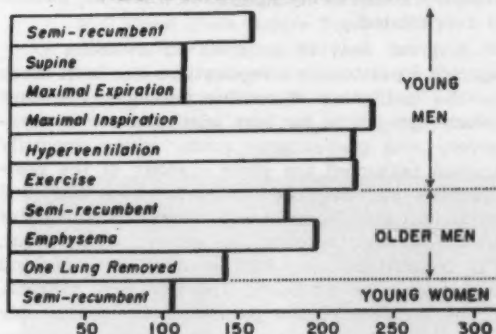
In order to prove the value of tracheotomy in eliminating dead space in respiration, Carter and Giuseffi² measured the volume of the space found in the air passages from the mouth and nose to the level in the trachea where the usual trach-

eotomy is made and found it to average 100 ml. Thus, by cutting down the dead space by two-thirds its original value tracheotomy appears to be particularly well suited to help ventilation in the patient with rapid shallow breathing who suffers from a relative increase in dead space.

Tracheotomy offers another mechanical advantage to respiration in the laparotomized patient by reducing resistance to the flow of gases through the respiratory passages¹. The major factor in resistance to air-flow in the bore of the air tube: resistance is proportional to r^4 . In by-passing the larynx, the narrowest point in the air-passages, tracheotomy produces a marked reduction in resistance to air flow. Besides the resistance offered by the narrowing at the larynx, the tongue falling against the posterior wall of the pharynx in a weak or semi-comatose patient creates an additional point of resistance to respiration.

Figure 3

RESPIRATORY DEAD SPACE



The patho-physiological consequences of hypoventilation are hypercapnia (CO_2 retention), anoxemia, and respiratory acidosis. Aside from the well known detrimental effects of anoxemia on the central nervous system, it also increases capillary permeability and may produce pulmonary edema which in turn will add to the degree of anoxemia¹⁰.

Bronchial Obstruction

The second complication which can be corrected by tracheotomy is bronchial obstruction due to accumulation of excessive bronchial secretions with consequent atelectasis and pneumonia. The incidence of post-operative atelectasis and pneumonia has been variously estimated by different authors with figures ranging from 2% to 47%. As Donald King⁹ observed, statistics based upon hospital records are notoriously unreliable, for, unless the atelectasis develops into a fulminating pneumonia, the complication is not recorded. A representative figure is that reported in 1937 by G. E. Lindskog⁸ based on a series of personal observations: namely, 10.9% pulmonary complications in abdominal operations. As indicated above the incidence is greater in males and again

greater in those men who had undergone upper abdominal operations. Although these reported figures have been modified by the subsequent widespread use of antibiotics, the tendency remains true today for patients who are severely ill and debilitated and whose powers of resistance to infection are impaired.

Normally the bronchial tree is cleansed by a sero-mucus secretion of the respiratory tract. This secretion is evacuated by four methods: the milking action of the alternate increase and decrease in length and diameter of the bronchi produced by the inspiratory and expiratory movement, the ciliary activity of the bronchial mucosa, the cough mechanism, and by lymphatic absorption. Accumulation of secretions may be due to increased production as in bronchitis, or impaired elimination due to the following: increased viscosity of the secretions which nullifies ciliary action, a weakened cough mechanism due to debility or inability to inspire sufficient air to produce an adequate cough as in emphysema where the patient is overinflated.

A great deal of progress in avoiding post-operative pulmonary complications has been made by the institution of routine post-operative care which appears to be best administered in a recovery and post-surgery room, where specially trained personnel are given custody of the post-operative patient. The routine has been described by Haight and Ranson⁴ and others. It consists of the following: turning the patient every hour, CO₂ inhalations every half hour for six hours and every hour for 24 hours, Trendelenberg position, encouragement of the patient to breathe deeply and cough frequently. In the event that these measures are not sufficient to keep the bronchi free of accumulated secretions, Haight has advocated aspiration of the trachea by catheter supplemented by bronchoscopy if necessary. The above measures have reduced the incidence of post-operative complications to about 4% after abdominal operations.

There is a group of patients in whom the above regimen is inadequate to prevent atelectasis and pneumonia. The group consists of individuals in whom bronchial secretions are excessive due to chronic bronchitis and whose expulsive mechanism is impaired by disease such as emphysema or disability, as in the case of the elderly male who has undergone an upper abdominal laparotomy, in whom the power of deep inspiration is further impaired by severe illness. It is interesting to note that the amount of secretions is greater after operations on the esophagus as noted by Reynolds et al,⁹ due to impairment of swallowing. The same applies to patients with intestinal obstruction.

The physiological derangement produced by atelectasis and pneumonia as shown by A. B. Hastings et al⁵, from his studies of blood reaction and blood gases in pneumonia, is anoxia. Whereas the anoxemia produced during hypoventilation

with air can be abolished with O₂ administration, the same cannot be done in pneumonia.

Advantages of Tracheotomy

With an understanding of complications affecting the respiratory function following laparotomy the advantages of tracheotomy are obvious.

1. Tracheotomy provides easy access to the tracheo-bronchial tree for ready and frequent aspiration of accumulated secretions. Moreover, this can be accomplished without the services of highly trained personnel and without the cooperation of the patient.

2. Tracheotomy provides the physiological advantages of cutting down the dead space and thereby improving alveolar ventilation plus reducing resistance to air-flow at the level of the larynx and the obstructing tongue in a severely debilitated patient.

3. By weakening the cough and by eliminating the need for cough tracheotomy protects the abdominal wound from dehiscence, and the severely ill patient from evisceration.

4. Tracheotomy provides the less obvious advantage of cutting down O₂ consumption by reducing the effort of the respiratory muscles.

Indications for Tracheotomy

Prophylactic or Elective Tracheotomy

Study of tracheotomies done in the past two years at St. Boniface hospital shows a marked increase in the incidence of tracheotomies performed at the time of surgery; it appears to convert a very poor operative risk into an operable case.

Candidates for elective tracheotomy manifest the following: a debilitated general condition, weak cough reflex as in emphysema, excessive bronchial secretions due to bronchitis, the silent regurgitation and aspiration of a debilitated patient with intestinal obstruction, aspiration due to the obstruction or paralysis of the pharynx or esophagus. Males, obliged to undergo an upper abdominal operation who manifest the above conditions, should be more urgently considered for a prophylactic tracheotomy.

Therapeutic Tracheotomy

Most tracheotomies performed in the post-operative period are done too late. The tracheotomy is usually done on a moribund patient as a last desperate gesture in the battle against death. The time to do a tracheotomy is when it is first considered as a possible aid to the patient.

The surgeon may be forewarned to consider tracheotomy in the post-operative period in the patient who comes to operation with evidence of bronchitis and emphysema. The following signs constitute indications for therapeutic tracheotomy:

Signs of Hypoxia and Hypercapnia

1. Sustained diastolic and systolic hypertension due to raised CO₂.
2. Tachycardia.
3. Restlessness, apprehension and disorientation, together with uncooperativeness.

4. Cyanosis.

These signs, as previously emphasized by Lahey, should not be interpreted as an indication for sedatives and narcotics which will further depress respiratory function with disastrous results.

Symptoms and Signs of Accumulated Bronchial Secretions

1. Moist cough.
2. Discomfort and pain in the chest, plus dyspnea.
3. Asymmetrical and diminished respiratory movements plus some cyanosis.
4. Diminished breath sounds with rales and ronchi.
5. Linear (lobular) atelectasis, mediastinal shift and elevated diaphragms on x-ray of the chest plus reduced excursion of the diaphragms on fluoroscopy.

If the above enumerated signs and symptoms of hypoxia and retained bronchial secretions cannot be controlled by post-operative routine as practised in our modern hospitals, and if tracheal aspirations by catheter or bronchoscopy is inadequate, tracheotomy should be considered.

Technique and Precautions with Tracheotomy

The vertical incision is preferred, for it favors better drainage of secretions, and the cosmetic results are surprisingly good. The incision should be packed instead of sutured tightly around the tube to avoid subcutaneous emphysema. Select a laryngeal tube with the largest bore that will fit the trachea, usually a 5 or 6 for adults; together with the proper curve and length of tube. The level of the tracheotomy site must not be too high or too low. The first tracheal ring should be spared to avoid a possible chondritis of the cricoid cartilage which is the only circular cartilage in the laryngotracheal passage, for this will lead to collapse and subsequent sub-glottic stricture. If tracheotomy is too low there is a danger of creating a mediastinal emphysema. In children, where tracheotomies are best performed over a bronchoscope in the trachea, hyperextension of the neck may lead to a low tracheotomy.

Proper care of the tracheotomy involves the following: The air must be humidified. The tracheotomy tube must be aspirated gently; a Y-tube connection interposed between the catheter and the suction machine permits control over suction, while the catheter is inserted and positioned in the right or left bronchus. The presence of the catheter in the tracheotomy tube produces a partial obstruction of the air-way and suction as demonstrated by Kirgin, can produce a marked fall in hemoglobin saturation (25% to 30%). The catheter therefore should be inserted quickly and withdrawn after 2 to 3 seconds. Infection can be avoided by proper asepsis and if necessary, the use of antibiotics. Changing the outer tube is less of a problem in the post-operative tracheotomies than in the one done for laryngo-tracheitis where there is a tendency toward the formation of crusts. Removal of the tube does not constitute a problem

in these cases.

Presentation of Illustrative Case

During the year of 1955 Mr. O. L., a 69 year old man was admitted to St. Boniface Hospital on the Surgical Staff. He underwent a total gastrectomy for carcinoma of the stomach. To expose the operative field a thoraco-abdominal incision was used, and, at the end of the resection, an esophago-duodenal anastomosis was performed to establish intestinal continuity. Pre-operatively this patient was found to have a chronic moist cough, emphysema and EKG evidence of pulmonary hypertension.

Figure 4

Pre-operative Chest Plate

On the 5th post-operative day he developed a leak at the anastomatic site together with a spiking fever up to 101, a pulse rate of 130-140, and a respiratory rate of 30. Though his cough was weak, he brought up thick mucopurulent sputum, and there were ronchi and rales in both lung bases.

Figure 5

P-O Chest Plate Before Tracheotomy

A tracheotomy was performed on the 9th post-operative day permitting control of the pulmonary complication through ease of aspiration of the tracheo-bronchial tree and better oxygenation

Figure 4



of the patient. The tracheotomy tube was removed after 4 weeks. About two months later this patient developed a severe esophagitis and a possible disruption of the esophago-duodenal junction together with a "homogeneous density over the periphery of the left lower chest to the 4th rib anteriorly." Clinically the left lung revealed moist rales to auscultation and the patient appeared somewhat cyanotic. The tracheotomy was re-established once more.

Figure 6
Illustration of Lung Fields at Time of
Second Tracheotomy

At the end of two weeks the tracheotomy tube was removed at which time the patient had completely recovered and continues well at the time of this report (a year and a half later).

Figure 7
Lung Fields at Time of Discharge from Hospital
Summary

Tracheotomy improves respiratory function by cutting down the volume of dead air space and eliminating resistance to the air-flow at the level of the larynx. It permits easy access to the tracheo-bronchial tree for the purpose of aspirating tracheal secretions. It has been shown that an upper abdominal laparotomy reduces tidal volume by 20% in the first post-operative days due to the development of rapid and shallow breathing. Patients with advanced emphysema, who have a low, fixed tidal volume, subjected to upper abdominal laparotomy may obtain an important improvement in alveolar ventilation through the use of tracheotomy. Since chronic bronchitis with

Figure 5



bronchial hypersecretion is a frequent accompaniment of emphysema, tracheotomy may be of great mechanical benefit by providing an easy route for clearing secretions.

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Figure 6

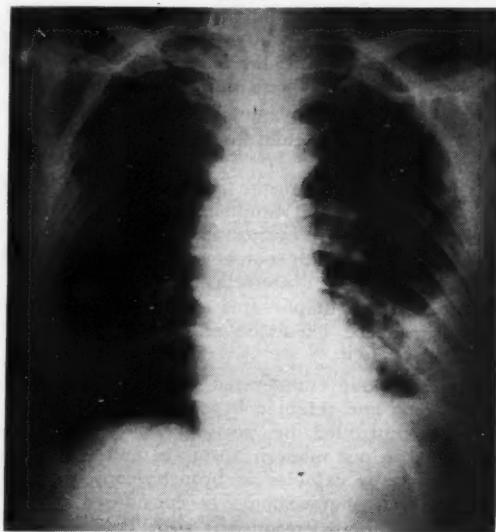


Figure 7



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Obstetrics

Cancer of the Cervix

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"Cancer of the neck of the womb is practically incurable. This statement is made advisedly and the proof of the correctness lies in the reports of treatment from all quarters of the world. At the present time there is no cure for cancer short of surgery, and it is no abuse of language to state that this disease is surgery's disgrace." Thus spoke Baldy¹ at the fifty-second Annual Meeting of the American Medical Association in 1901 in criticism of Cullen's results of surgical treatment of cancer of the cervix as reported in his text "Cancer of the Uterus"² published in 1900. Of 61 hysterectomies performed or attempted, 13 or 21 percent were living at the time of operation, two cases being five-year survival.

The following fifty years were to see not only improvements in surgical techniques which would refute this statement, but the introduction of radio-therapeutic methods which would replace surgery in the traditional pendular swing, the adoption of an international classification which would result in comparable statistics, and a drive towards earlier diagnosis, the sum total being five year survival rates approaching 40 percent of all cases of cancer of the cervix.

An historical account of the surgical treatment of cancer of the cervix has been written by Speert³. That the cancerous uterus might be surgically extirpated was suggested by Wrisberg and Oseander at the end of the eighteenth century. In 1878 Freud performed the abdominal operation upon which the modern radical hysterectomy is based, to be followed in 1895 by Ries who carried out the first dissection of pelvic nodes in conjunction with this operation. Wertheim and Schauta began their series of radical hysterectomies by the abdominal and vaginal approach respectively thereafter and at the turn of the century most discussion evolved about the abdominal versus the vaginal operation in the surgical treatment of the cervix.

A similar historical review of radiation therapy of cancer of the cervix has been written by O'Brien⁴. It was in the year 1898 that Pierre Curie announced the discovery of radium. In 1901 he drew attention to its possible properties of medical value following the "radium burn" of Becquerel who in 1901 placed a radium tube in his vest pocket where it remained several hours, to be followed in fourteen days by a virulent inflammatory reaction. The first report of treatment of cancer of the cervix by radium was by Dr. Margaret Cleaves of New York in 1903, followed

shortly by case reports of Abbe, Morton and others. From that time radiation evolved as the primary method of treatment in most centres, and multiple varied techniques of local application of radium and/or roentgen therapy have been described, that of the Radium hemmut of Stockholm under the direction of Heyman being the most outstanding.

The primary method of treatment as carried out by the members of the Department of Obstetrics and Gynecology of the Winnipeg General Hospital has been irradiation, the application of radium in and around the cervix along the lines of the Stockholm technique followed by roentgen therapy. The interstitial application of radium and radon seeds has been abandoned. Two series have been reported of patients treated within this department. In 1945 McQueen⁵ reported upon 116 patients, both private and public, whose treatment he was responsible for during the years 1931 to 1940 inclusive. Of the 38 patients treated during the years 1931 to 1935 the five-year survival rate was 26 percent, while of the 78 patients treated during the years 1936 to 1940 the five-year rate was 35 percent, the total five-year survival rate being 32 percent. Black⁶ reported another series in 1954. Of 250 patients admitted to the public service during the years 1939 to 1953 inclusive 64 or 27.2 percent were alive and free of disease after five years.

Such results leave much to be accomplished in the light of the most recent Annual Report on Results of Treatment in Carcinoma of the Uterus, the tenth and last to be edited by Heyman⁷. Of 102,614 patients treated by radiotherapy in 84 institutions in 20 countries, the five-year survival rate was 39.8 percent. To approach this survival rate several steps have been taken, namely unification of the interest of gynecologist, pathologist, radiotherapist and physicist in the form of a cancer committee, more accurate estimation of dosage and its distribution by visualizing the arrangements of the radium applicators by stereoscopic film and with the aid of the scintillation dose rate meter, and the addition of cobalt 60 teletherapy with superior physical characteristics and skin preserving qualities. The effectivity of these factors is indeterminable because of the short interval since their introduction.

Radical hysterectomy, abandoned by most gynecologists after the advent of radiotherapy, has enjoyed an impressive resurgence during the last decade, and now bids fair to take a place of increasing importance along with irradiation techniques in the management of cervical cancer. Bonney maintained interest in the surgical treatment in the English speaking part of the world, reducing his operative mortality to 9.0 percent before the onset of the second great war. The

¹Presented at the Inaugural Meeting of the Manitoba Chapter of the American College of Surgeons, January 19, 1957.

introduction of chemotherapy, antibiotics, blood transfusion and proper balance of electrolytes have stimulated surgeons to more radical techniques with an almost negligible operative mortality rate. Meigs⁸, who spearheaded this attack in America, stated as his more important reasons radioresistant growths, the lack of a chance for recurrence or the formation of a new growth, and the inability to cure cancer involving lymph nodes deep in the pelvis with radiation. Several modifications of the technique of radical hysterectomy with lymphadenectomy have been described, each applicable to Stages I and II and a small number of Stage III cases. The trumbling block has been an incidence of urinary tract fistulas approaching 10 percent in many series; the reward has been a so-called "soft pelvis."

Further statistics quoted in the tenth Annual Report on Results of Treatment in Carcinoma of the Uterus have left Heyman with the conclusion that there seems to be no need for primary surgery when adequate radiotherapy is available, the five-year survivals with surgery as compared to radiotherapy being 62.9% and 64.9% respectively in Stage I cases and 42.9% and 47.4% respectively in Stage II cases. The ten-year results were similarly almost identical. Unfortunately, no series of statistical significance has been reported in which a direct comparison has been made of a surgical series and a radiotherapeutic series treated in one unit.

Perhaps a more rational approach to the selection of cases for irradiation or surgery will be determined in the future. Studies, such as the works of the Grahams⁹ in determining prognosis from changes in non-malignant epithelial cells in the presence of cancer and following radiation, and that of Glucksman¹⁰ in demonstrating cellular responses by examining biopsies of the growth during the course of radiation therapy, may distinguish the radio-resistant cancers requiring surgical excision. In addition, observations of the results of even more radical surgery as described by Brunschwig will evaluate and justify such procedures to the more conservative gynecologist.

While the controversy as to the method of treatment continues, it is obvious that a continued reduction in mortality from cancer of the cervix can result only from earlier diagnosis. Unfortunately early clinical diagnosis bears no relationship to the extent of the disease, the appearance of symptoms being due largely to chance, the chance that coitus or douching or infection may precipitate abnormal bleeding or discharge. By earlier diagnosis is meant diagnosis made in the pre-clinical stage. Biopsy of all suspicious lesions of the cervix, by random or four-quadrant biopsy or by the so-called cold-knife cone biopsy, and cytological studies of exfoliated malignant cells as described firstly by Papanicolaou in 1928 are or are becoming time-honored methods of diagnosis,

colposcopy or colpomicroscopy and the Schiller test being worthy of mention.

Two problems have made themselves apparent while attempting earlier diagnosis, an economic one, namely the extent to which routine cytological examinations should be made, and a clinical one, namely the entity termed carcinoma-in-situ or intraepithelial carcinoma. The former will find its solution with time as with routine serological testing for syphilis and radiological examination for tuberculosis. The latter deserves further discussion.

Carcinoma-in-situ poses a challenge to pathologist and gynecologist alike. Its reported incidence has varied from 0.02 to 3.5 percent of all cervix examined by smear, biopsy and following hysterectomy for non-cervical diseases. That controversy exists amongst pathologists as to diagnosis was demonstrated by Siegler¹¹ who forwarded 20 selected cervical slides to 25 different pathologists in an attempt to determine the degree of similarity in criteria for the diagnosis of this lesion. The results demonstrated that, on the sections chosen, the agreements in diagnosis were not within a desirable range. (Of the 25 pathologists three made no diagnosis of carcinoma-in-situ while six saw 9 or more examples.) Equally difficult has been the decision as to the necessity for or the method of treatment. The association of this pathological picture with invasive carcinoma has suggested that carcinoma-in-situ may be a phase in the "life-cycle" of cancer of the cervix, invasion of the underlying basement membrane occurring up to ten or more years later. To date only a few more than 60 cases of non-invasive to invasive types of cancer have been reported, while from the negative standpoint the number of cases which have never progressed to the invasive stage is unknown. The reversibility of carcinoma-in-situ, as seen in association with pregnancy, has added greatly to the problem. To date, however, a stand has been taken that carcinoma-in-situ be treated by total hysterectomy with the removal of a wide cuff of vagina in the older woman, and by local excision in the young woman wishing children, carefully following the latter by smears and biopsies.

One further aspect of cancer of the cervix remains, namely its possible prevention. The treatment of an eroded or chronically inflamed cervix by cautery or conization postpartum is a time-honored procedure which may have reduced the incidence of malignant change, its importance having been queried only recently. Another time-honored procedure, namely subtotal hysterectomy, on the other hand has left its aftermath, namely the stump of the cervix, a potential site for cancer.

Irwin¹² reviewed the problem of carcinoma of the cervical stump in patients admitted to the Winnipeg General Hospital. Of 516 abdominal hysterectomies performed from December, 1947 to March, 1953, 285 (55%) were total and 231 (45%)

subtotal procedures. During the period from May, 1944, to December, 1951, in the same hospital, the Manitoba Cancer Institute's Tumor Service recorded 21 cases of epidermoid carcinoma of the cervix following subtotal hysterectomy, an incidence of five percent of the total number of cases of carcinoma of the cervix registered in the same period. Seven were discovered within two years of the operation, and these were almost certainly present at the time of operation. It is quite possible that a total operation might have cured some of these. Of the 14 cases discovered more than two years following surgery, most if not all would have been cured by total hysterectomy, and the six cases with a ten years or longer interval following operation would not have developed cancer of the cervix. Irwin concluded that total hysterectomy might have resulted in a reduction of deaths due to carcinoma of the cervix, and that in the absence of a significantly greater operative mortality in the series reported it is the operation of choice.

While many facets in the diagnosis and treatment of cancer of the cervix are of equal interest, such as the observed response to radiation of malignant cells in lymph nodes, or the use of colloidal gold for purpose of irradiation, suffice it to conclude this discussion with the apparent observation that for most cases in most units treatment by irradiation is the wiser course, and with a recommendation that means for earlier diagnosis be instituted.

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Medicine

Hodgkins Disease—Follow Up in 100 Cases

Murray Campbell, M.D.

In the First Edition of Osler's Modern Medicine (1907) Hodgkins disease heads the list under the classification "Diseases of Obscure Causation." Nowadays in addition the etiology, the pathology and the results of treatment are often confusing as well as being obscure. Although Hodgkins disease has been known since 1832 it did not appear as a separate entity in the Vital Statistics of the United States until 1921 and even at that was a subdivision under pseudoleukemia until 1938. In that year it was classed as a subgroup in parasitic and infectious diseases in the International List of Causes of Death¹. It is not so long ago when there was considerable support for the view that it was caused by the avian bacillus. In 1948 it was placed among the neoplasms of lymphatic and hemopoietic tissues, and, while that finds general agreement, such an eminent authority as Wintrobe² says "it is not clear whether Hodgkins disease is multicentric in origin rather than a metastasizing disorder which arises from a primary focus." In this regard there is an exhaustive article in a recent issue of the British Journal of Cancer³ attempting to show that Hodgkins disease always arises either in the thymus or thymic rests.

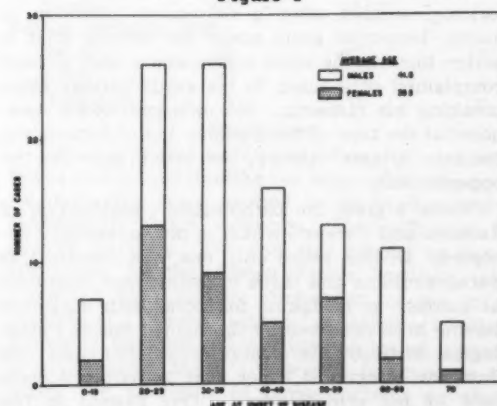
This series covers the experience at the Winnipeg General Hospital from January, 1942 to

December, 1953. Another fifty-six cases admitted during the same period have been omitted because of lack of histological proof. Actually 104 proven cases were observed, but four cannot be traced. The shortest follow-up has been thirty-six months and the longest fifteen years. There were 66 males and 34 females, a common proportion in current series. According to a report from New York⁴ seven per cent of all malignant neoplasms are in the lymphoma-leukemia group and one sixth of these are Hodgkins disease. In the General Hospital during the period under discussion 25.4% of this group were proven Hodgkins disease.

Figure 1

Figure one shows the age incidence at the onset of symptoms. The number of cases under twenty

Figure 1



From the Department of Medicine, General Hospital, Winnipeg. Delivered to the regular monthly meeting of the Winnipeg Medical Society, November 23, 1956.

is less than usual but the customary sex proportions prevail with a relatively high proportion of females in the 20-29 group and only two females in seven under twenty years. The average age at onset is higher in both sexes in many series, but this is accounted for by the fact just stated, only seven per cent of the total being under twenty years compared with the usual fifteen to seventeen per cent.

Table 1
Initial Symptoms

Enlarged Nodes	
Cervical—right	11
Cervical—left	8
Cervical—both	6
Cervical—unstated	9
Supraclavicular	7
Axillary	6
Groin	3
Mediastinal	1
Generalized	3
Total	54
Other Symptoms	
Weakness or tiredness	10
Abdominal pain	8
Loss of weight	4
Localized pain (not abdominal)	7
Anorexia	3
Cough	4
Pruritus	3
Miscellaneous	8
Unknown	3
Total	50

Table 1 lists the initial symptoms, not necessarily those at the time of admission. The larger number with initial involvement of the right cervical and supraclavicular nodes as compared with the left conforms with the findings elsewhere. Painful nodes at onset seem to be a bad prognostic omen. Table 2 indicates the division into stages at onset used in this series and taken from the British Journal of Cancer⁵. Two cases followed tonsillectomy, another after a submucous resection, a fourth developed groin nodes six months after a severe blow to the same region and a fifth patient complained of a lump in his axilla shortly after breaking his humerus. No enlarged nodes were noted at the time of the fracture, but unfortunately for this "trigger" theory, the nodes were on the opposite side.

Table 3 gives the pathological classification of Jackson and Parker⁶, which is not universally accepted. In this series only one was classified as paraganuloma and three including one diagnosed at autopsy as Hodgkins Sarcoma, both diagnoses having been reviewed by the Armed Forces Pathological Institute. In a large series (388 cases) the Institute⁷ diagnosed 8 per cent as paraganuloma and 1.2 per cent Sarcoma. One patient in this

series presented as a giant follicle lymphoma and at post-mortem some years later was diagnosed as Hodgkins granuloma with no evidence of the original diagnosis.

Table 2
Staging of Hodgkins Disease

- Stage 1** Lymph node involvement in only one group.
- Stage 2** Lymph node involvement in two or more adjacent groups in either upper or lower half of body.
- Stage 3** a) Generalized lymph node involvement.
b) Constitutional manifestations for which no other reasonable cause can be found.
c) Disease apparently limited to retroperitoneal lymph nodes.
d) Involvement of structures other than lymphatic.

(Thomson—Brit. Jour. Cancer—March, 1955)

Table 3
Pathological Classification
(Hodgkins Disease)

- Paraganuloma** Adult lymphocyte predominates. Reed-Sternberg cells few in number. Looks like lymphosarcoma. Absence of necrosis or fibrosis.
- Granuloma** Reed-Sternberg cells and great pleomorphism. Plasma cells constantly present. Mediastinal nodes most commonly involved. Spleen enlarged in 65-80%. May involve all organs except the nervous system.
- Sarcoma** Primary in retroperitoneal nodes in 72%. Predominant cells are lymphocytic—two or three times normal size.

(Jackson & Parker—Monograph)

While the nodes were involved in all cases at some stage or another the spleen and liver were involved at a relatively early stage in thirty and twenty cases respectively, the lungs in nineteen and the bones in nine. In two the disease appeared to be primary in the bowel and in one in the stomach wall with confirmatory post-mortem findings in all three. Herpes zoster was only recorded once, as was mycosis fungoides, a low figure for both. Hemolytic jaundice was only present in two. A small number—five—had severe anemia except in the late stages. Pel-Ebstein fever occurred in ten and severe pruritis in the same number.

Table 4 Survival in Months According to Treatment			
No Treatment	Inadequate Treatment	Adequate Treatment	
		Average	
20.0	43.6	46.5	
Stage 1	37.8	57.4	
Stage 3	47.1	21.7	

Definitive treatment consisted of radiotherapy or nitrogen mustards or both. Eight cases, four of which were diagnosed at post-mortem did not

receive either. Table 4 indicates the results according to the amount of treatment received. It was considered adequate if 2,000 R was given in one series for a group of nodes, if 24 mgm. of Nitrogen mustard was given where indicated, or if both were used, the Nitrogen mustard was given within six weeks of radiotherapy. In some instances good responses were obtained with what must be considered inadequate treatment. The results suggest that treatment is not of much avail in Stage 3, but, if adequate, is very significant in Stage 1. I have been unable to find an untreated series for the sake of comparison. Thomson's³ series discussed below is unusual in that 14 out of 224 cases were not given definitive treatment.

The average survival in months was 33.74, being 39.23 for females and 30.65 for males. The better prognosis in females seems to be almost universal. Table 5 is a comparison with an all-treated group, (Videbeak⁴) which also had a relatively higher proportion of females, these factors accounting for the longer average survival of 41 months. Table 6 gives the five year and the ten year survivals in comparison with Thomson's series in which the proportion of females is similar. Stage 2 is omitted in the individual comparisons, but not in the overall picture.

Table 5
Average Length of Survival in Months
According to Age of Onset

10 - 19	28.5 (45)
20 - 29	45.6 (45)
30 - 39	47.0 (47)
40 - 49	44.0 (41)
50 - 59	28.4 (47)
60 and over	14.4 (22)
Living	8.0 (16)

Figures in brackets—Videbeak, A.: Act. Med. Scand.

January 1950—172 treated cases (90 males and 82 females) 1930—45.

Table 6
Hodgkins Disease
Five Year Survival—Percentages

Stage 1	Stage 3
Males 34 (52)	Males 14 (2)
Females 50 (69)	Females 33 (7)
Average 40 (59)	Average 21 (3)

Totals 29 (29)

Ten Year Survival—Totals

Stage 1	Stage 2	Stage 3
Males 3		Males 1
Females 4	Females 1	Females 1

Total 10 = 10% (6.7)

Percentage in brackets—Thompson, Brit. Jour. Cancer—1955. 224 cases, 1930—47.

Tables 7 and 8 give some details of the "acute" cases, those dying less than six months after the onset of symptoms and those living ten years or more. It will be seen that there are no females in

the "acute" group and in the long survivors, the usual proportion of males and females is reversed. Table 9 is self-explanatory and presents a gloomy picture, but three deaths were attributable to other diseases, and another died from anemia apparently associated with treatment.

Table 7
Survival—Six Months or less

Sex	Onset	Age	Remarks
M.	1	66	Sarcoma—treatment of no avail
M.	1	80	Post-mortem diagnosis
M.	1	71	Broken arm—3 months before onset of symptoms
M.	1	38	Response to X-ray, neurodermatitis—X-ray?
M.	2	17	Treatment—no effect
M.	3	60	Treatment—no effect
M.	3	70	No treatment
M.	3	46	Treatment—no effect
M.	3	38	Too sick for treatment, Duration—two months
M.	3	43	H. Sarcoma of cecum

Table 8
Survival—Ten Years or More

Sex	Onset	Age	Remarks
M.	1	67	No treatment—PM—Sarcoma
F.	1	33	Adequate treatment
F.	1	22	Adequate treatment
M.	1	30	Adequate treatment ?
F.	1	15	Adequate treatment
M.	1	64	Inadequate treatment—paragranuloma?—granuloma
M.	1	36	Inadequate treatment
F.	2	46	Adequate treatment
F.	3	34	Adequate treatment ?
F.	3	33	Adequate treatment

Table 9
Hodgkins Disease

No. of Cases	Total Data	1941-46	1947-50	1951-53
Total	56	28	19	
Male	38	16	12	
Female	18	12	7	
Status—October 1956				
Dead	50	27	15	
Alive	3	1	4	
Untraced	4	0	0	

Discussion

Nothing in this series has helped to elucidate the obscurity surrounding the cause of this disease. At least nine cases seemed to be in Wintrobe's multicentric origin category. The pathology is equally puzzling. The one case classed as paragranuloma by the Armed Forces Institute was diagnosed as Hodgkins granuloma by the local pathologist. Three others originally labelled Hodgkins Sarcoma were when reviewed classed as granuloma. There are several large series in which the diagnosis of paragranuloma is used,

and in that reported by Smetana⁷ the survival rate for seven years was three times that of Hodgkins granuloma. Hall⁹ states "The physician—is faced with the problem if the histologic diagnosis—has any other significance than to establish the diagnosis of malignant lymphoma"—but then proceeds to give the prognosis according to the Jackson-Parker classification. While he has twice as many five year survivals among the paraganuloma cases, the total number of patients involved is small.

I feel the survival rate might have been improved if nitrogen mustard had been given routinely a few weeks after radiotherapy in the early or Stage one group. Notwithstanding the fact that this was not the usual practice, it does appear that treatment in this group did prolong life. There were too few cases in Stage 2 to draw any conclusions, but definitive treatment did not seem to make for a better prognosis in Stage 3. It is realized there is a greater risk of anemia if

one form of treatment follows another at a short interval, but the advantage to the patient seems to outweigh this possibility.

Acknowledgment

The Staff of the Record Office at the Winnipeg General Hospital, the Staff of the Forlong Institute and Dr. Margaret Owchar of the Manitoba Cancer Institute have been most helpful in tracing the patients after discharge from hospital.

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Neurosurgery

Missed Brain Tumors*

Dwight Parkinson, M.D.

One must immediately explain that brain tumors include any space occupying lesion within the cranium whether it be clot, abscess, cyst, primary or secondary neoplasm or vascular malformation. Benign or malignant, these all have one common feature, namely a relentless progression which will eventually kill the patient. They differ only in location and speed of progress. For the most part the exact nature of the space occupying lesion is never determined until approached surgically.

We all miss diagnoses, particularly early in the course. Fortunate indeed is the physician or clinic who is seen as a last resort. All too often the subtle has by then become obvious.

The diagnosis of brain tumors is particularly treacherous. Each of the various signs and symptoms of a brain tumor are more frequently caused by some other condition. For example, the patient with headache is far more likely to have the symptom on some basis other than brain tumor. Almost every initial sign and symptom of a brain tumor is originally suspected as due to some other condition. Thus, a close inspection of the various misleading guises under which brain tumors may masquerade is a healthy approach.

A small percentage of people coming to the doctor's office for either a general check-up or some other condition harbour an asymptomatic brain tumor. Without complaints referable to a brain tumor one is not expected to look for and

recognize the lesion. These are not properly classed as missed brain tumors. There is no indication for the search in the first place. On the other hand some people will present to their physician with signs and symptoms of a brain tumor which are misleading or are misinterpreted by the examiner and hence the "missed brain tumor."

The following list of ten is submitted because the experience has shown that these brain tumor presentations most frequently lead the physician astray from the correct diagnosis.

1. **Disturbance of personality.** Any patient, irrespective of age, with unexplained changes in personality should be suspected of having a brain tumor.
2. **Disturbance of vision.** Double vision, visual field defects and failing visual acuity may each and all be caused by a brain tumor. Probably the most treacherous is failing vision with associated optic atrophy. All too often such conditions are left with, "optic atrophy," as the final diagnosis.
3. **Pain about the orbits, lower forehead and nose.** Understandably these are originally investigated for sinus trouble. However this same distribution of pain and discomfort may be caused by tumors above the tentorium.
4. **Hallucinations.** Quite properly the hallucinating patient is investigated on other grounds first. If the answer is not forthcoming it should be remembered that an intracranial mass may cause hallucinations prior to any other symptoms or signs.
5. **Extremes of age.** It is erroneously stated that the very young do not have brain tumors.

*Paper given at St. Boniface Clinical Luncheon.

Thus, suggestive signs and symptoms particularly persistent vomiting are dismissed from this suspicion in the very young.

The very aged quite understandably are considered as vascular disturbances whenever an intracranial change is evident. However, if there is a relentless progression these also should be considered as tumor suspects. Either extreme of age does not exclude the possibility of a brain tumor.

6. Extremes in the length of the history. With a slowly growing tumor the length of the history indicates to the unsuspecting physician that a brain tumor is excluded. It should be remembered that the low grade gliomas and benign tumors not uncommonly produce symptoms over 20 years, with seemingly little change. At the other extreme a very abrupt change in the intracranial relationship may result from occlusion of a vessel by tumor invasion or distortion, or the sudden swelling of a tumor and adjacent tissue due to venous embarrassment. In such instances suspicion is diverted into the realm of vascular accident.

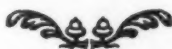
7. Multiple signs with irregular onset. In this condition disseminated sclerosis is the obvious

pitfall. Brain tumors, particularly those in the posterior fossa may produce multiple signs with irregular onset. These may seem to be quite widespread and yet a careful neurologic examination will relate them all to a single focus. It is unwise to label any patient multiple sclerosis without adequate proof at the hands of a competent neurologist.

8. Seizures. Particularly coming in adult life, seizures of any variety must be considered due to an intracranial space occupying lesion unless proven otherwise.

9. Absence of headache and vomiting. Headache and vomiting may never appear up to and including death in patients with a brain tumor. In other situations they are often extremely late in appearance. The lack of either one or both should not lead one astray from the diagnosis of brain tumor, if there is other reason to suspect such a lesion.

10. Previous negative investigation. It should be emphasized that the brain, like any other organ, should be reinvestigated if the signs and symptoms persist or increase even though a complete and adequate investigation was previously normal.



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Laryngology

Reconstructive Nose Surgery (Rhinoplasty) Technique

Leon A. Pauls, M.D.
Winnipeg, Man.

Modern rhinoplasty owes its present respectable status and popularity to Jacques Joseph, who wrote an excellent book on the subject in 1928. The techniques used by Professor Joseph form the basis of present day procedures (with some modifications).

Reconstructive nose surgery is done either for therapeutic reasons such as interference with breathing, removal of a neoplasm, or for cosmetic considerations. In the latter case the deformity must be serious enough to interfere with the patient's peace of mind or else handicap him or her in the pursuit of a chosen career. The desire for corrective surgery on the part of the patient must be strong and spontaneous, uninfluenced by suggestion or basic psychoneurosis. The latter would be best handled by the psychiatrist.

In a rhinoplastic approach the nose is not merely treated as an ornament but as a functioning living structure. Should there be any breathing interference due to a deviated nasal septum, a submucous resection can be done at the same time.

Of late this subject has been receiving a great deal of publicity in the press, radio and television. The nose being a prominent feature of the face, a person with any disfigurement regardless whether the cause be traumatic, neoplastic or familial sooner or later becomes self conscious and seeks advice.

Indications for Rhinoplasty

1. Great desire on the part of the patient to have deformed nose corrected be it distorted, long, hump, short, wide or due to an unreduced fracture.
2. Interference with breathing in addition to deformity.
3. Interference of nasal contour with certain powers of expression. e.g.: smiling.
4. Certain occupations. e.g.: actors, models and other occupations where their income would be enhanced or maintained through a rhinoplasty.
5. Removal of neoplasms of the nose.

Any person of fifteen years and over may be eligible. If the nasal features are twisted, a conservative reconstruction can be done even in younger children. The technique is not difficult, and hospitalization is short. Most cases are done under local anaesthesia, and the results are very gratifying. Before attempting the operation for the correction of the deformity one must have a

clear conception of the end result desired. Facial proportions pleasing to a Mongolian will not satisfy the esthetic perceptions of a Caucasian. Some people not only admire their facial characteristics, but often are proud of them.

While the exact ideal normal does not exist, one may be guided by certain basic principles and average characteristics of the race from which the patient comes.

To arrive at the objective we employ the following preliminary procedures:

1. Visual examination
2. Photographs
3. Cast analysis

Visual Examination

Since there is often a marked difference in the two sides, profile observation is made from both sides. A straight nose with a profile angle of 30 degrees is considered ideal.

Observe where the deformity is. It may be in the nasal bones, upper lateral cartilages, septum, lower lateral cartilages, tip or columella.

Full Face Observation

Will demonstrate asymmetries and deviation from the central position. Observe the alae or wings of nose for asymmetry.

Basal Observation

In the white race the nostrils are elliptical from above downwards, while in negroid races they are transverse or nearly round. The nares may differ in shape with race, heredity, disease and individual characteristics.

Photographic Analysis

This is recognized as a routine procedure both for diagnosis as well as from a medico-legal standpoint. The photographs will show asymmetry between:

1. The nasal components.
2. Relationship between the nose and the rest of the face.

Photographs are taken before the operation, as well as 3-6 months after the operation when all the swelling has subsided.

Cast Analysis

Because of their three dimensional record, casts are considered superior to photographs. They are easy to make and form an excellent way of demonstrating the deformity to the patient. Ordinary plaster of paris may be used. The face is covered with cold cream and an impression taken with plaster directly over the face. The plaster dries in 5-10 minutes. Minor defects are later smoothed out. This forms the negative.

The next day a special wax is poured into the plaster impression and an exact wax reproduction of the face is obtained. You discuss with the patient what you propose to do, taking into consideration his wishes with regard to finer adjustments.

Preoperative Management

The patient is hospitalized. Three grains of nembutal are given by mouth one hour before operation. Some require 75 mgms. demerol in addition to above about a half hour before the operation. The nasal vestibules are washed with green soap on cotton applicators and rinsed with sterile warm water. The nasal fossae are then anaesthetized by placing cotton applicators dipped in 10% cocaine 1:1000 adrenalin as follows:

One applicator is placed under the dorsum of the nose as high as the olfactory sulcus. One is placed over the foot of the middle concha and one along the floor of the nose. Some do not use cotton applicators, preferring cotton dipped in cocaine adrenalin.

A strip of nasal packing is placed along the floor of the nose to prevent escape of blood into the nasopharynx. This is later removed. With a 2 inch 24 gauge needle the external pyramid is next anaesthetized with (2% Procaine hydrochloride sol with epinephrine) by entering the needle at the centre of the plica nasi between the upper and lower lateral cartilages. The needle is advanced along the dorsum to the nasal root. The needle is withdrawn and introduced into the outer margin of the pyriform opening and advanced close to inner canthus of the eye. It is then withdrawn again and advanced along the floor of the nose to the incisive foramen. The same procedure is carried out on the opposite side and local anaesthesia deposited.

Surgical Technique

First Stage: Exposure of Nasal Framework.

The right ala is retracted and an intercartilaginous incision made into the fold along the medial end of (upper) lateral cartilage. A Joseph double edged knife or curved scissors are passed upward over the (upper) lateral cartilage up to the nasal bones. The periosteum of the nasal bone is then incised and elevated. The same technique is carried out on the left side. A curved button end knife is introduced under the periosteum of the nose and continued downward all the way down the dorsum of the nose as far as the septal angle. It is best to hug the lower cartilaginous end of the septum when separating the membranous septum away from it.

Second Stage: Removal of Nasal Hump.

A right hand saw is first introduced and the hump sawing is begun until the saw goes through to the left side, or a left hand saw can be introduced to complete the sectioning of the hump on the left side. Button knife will sever the remaining attachments of the hump. The resected nasal hump is removed with hump forceps. Rasps and bone sweepers are used to smooth out rough edges.

Third Stage

Excision of a wedge piece of cartilage from

lower end of septum will shorten the nose. Amount of excision depends on shortening desired.

Fourth Stage: Lateral Osteotomy.

After removal of the hump a wide gap is felt over the bridge of the nose. This gap is narrowed or obliterated by means of bringing the lateral walls together. The edge of piriform aperture is located on right side, then on the left side, a small incision is made over the mucosa wall of the piriform aperture, the periosteum is elevated all along the lateral wall of the nose in front of the lacrimal crest and medial canthal ligament.

A saw or guarded chisel is introduced and the lateral wall is cut through to the inner periosteum. The same procedure is carried out on the opposite side of the nose. A guarded osteotome is then introduced to the root of the nose and the lateral nasal wall is outfractured first, then manipulated with the fingers toward the midline, thus narrowing the bridge of the nose.

Fifth Stage: Attention to Nasal Cartilages.

This will depend on whether you wish to narrow the nose or shorten or both. If narrowing is desired you take a longitudinal strip of upper lateral cartilage off at the junction with the septum. If shortening is desired you excise a portion of the upper part of each alar cartilage. This latter can be done either by the eversion method or by the rim circumferential incision, if wider exposure is desired. It is generally necessary also to trim the redundant lower ends of the (upper) lateral cartilages before completion of the operation.

Sixth Stage: Splinting the Nose.

One or two sutures of plain surgical gut or silk are placed on each side through the membranous septum. Some prefer a through plain catgut through the cartilaginous septum joining columella below. Half inch nasal packing is placed loosely in each nostril to hold the cartilages in their corrected position. Some use aureomycin nasal packing. The nose is then painted with Tincture of Benzoin and narrow adhesive strips are applied to the outside of the nose to hold the newly arranged components in place. Some use a layer of softened stent as a splint over it, others use aluminum, others still use plaster of paris.

Post Operative Care:

Sand bags are placed on both sides of the head; talking, laughing is restricted the first 48 hours. Antibiotics are given routinely. The intranasal packs are best left alone for 5-6 days. Some prefer to remove packs in 24-48 hours. On 7th or 8th day, the adhesive is removed from the nose with adhesive solvent. If any nasal components are out of alignment they can be moved back into place, otherwise they are best undisturbed. The outside splint is not removed till about the 9th or 10th day after the operation. Post operative infections are very rare and revisions only average about 10%.

Case Reports

The following two cases are shown to illustrate the common types of deformities and their method of correction given.

Case 1, Mrs. (C) Age 34



Photo, Sept. 11/56



Photo, Sept. 11/56



Photo, Oct. 22/56

This woman had a nasal obstruction due to a markedly deflected septum as well as a long hump nose. Under local anaesthesia, the technique described was used in the above case. The hump was removed, the nasal bridge narrowed by lateral osteotomy, the nasal tip was remodelled and the nose was shortened by rotation of the lower over the upper cartilaginous vault. A submucous resection was done. The septum was then

shortened so as to leave a difference of 2 mm. between columella and lateral nasal walls. A through and through stitch was used to approximate cartilaginous nasal septum to columella.

Intranasal packs and splints applied as described previously. She was in the hospital only 3 days post operatively. The packs were removed in the office on the fifth day. Splint removed on the eighth day.

Case 2, Mrs. (B) Age 38



Photo, Nov. 28/56



Photo, Nov. 28/56



Photo, Dec. 27/56

This woman had a typical saddle shaped nose. The technique here was entirely different. A general anaesthetic was used since the patient was quite nervous. (A local anaesthetic can be used ordinarily). A bed for a graft was prepared through a columellar-splitting incision. The sep-

tum was exposed with curved Metzenbaum scissors and separation was continued over the nasal bones. The periosteum was elevated with a Joseph elevator and the bone was roughened all the way up to the glabella. With a small chisel, an angle was formed at the uppermost end of glabellar end

of the nose.

A small swab of adrenaline soaked gauze was then placed into the prepared bed to insure hemostasis. Gowns and gloves were changed and the right hip was draped. (The hip was prepared the night before with a sterile dressing).

An incision was made over the crest of the ilium extending back from the anterior superior iliac spine. The incision was extended for about 2½-3 inches. A small cap of cortex was removed with chisel and hammer and a 2 inch wedge of cancellous bone was resected and lifted out of the iliac crest. The cap of cortex was replaced and wound sutured with silk. The graft was then placed on a separate table and moulded with rasps and scissors to fit the nose.

Full length graft was then inserted over the dorsum of the nose all the way from the glabella and fitting over the nasal bones and along the septum down to the tip of the nose.

Chromic gut was used to approximate deeper layers of incision and interrupted silk used on the skin. Adhesive strips were applied to hold the bone in place. This was reinforced by a stent dental splint. At the end of 12 days, the graft felt solid.

General Considerations

1. Most nasal humps don't appear until adolescence and slowly grow worse as the patient grows older. Since the ultimate success of rhinoplasty will depend a great deal upon skin elasticity and ability of the tissues to adapt themselves to the rearranged bone and cartilage, the younger the person, the better will be the outcome. Persons with thick oily skin are not likely to get as good a result. Rhinoplasty in later years must also be more conservative in degree, since older people may not adjust psychologically to the new nose.

2. A rhinoplasty and submucous resection can be performed concurrently with good result provided the resection were done conservatively and sufficient septum left for support.

3. Not all cases seen need a reconstruction of the tip done as a routine, but one must pay particular attention to the tip in order to obtain a good result. The writer uses the rim incision technique. The incision is made 2-3 mm. inside the cartilaginous rim, a small cuff of skin is left along the ala. This helps prevent contractures at the nostril border.

4 Autogenous cancellous bone from iliac crest is gaining in popularity for saddle shaped noses. It is easily obtained. The graft takes in practically all cases and at times even under adverse conditions where no other type of graft would take.

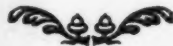
The graft in saddle defects can be introduced through an intercartilaginous incision, through a circumferential incision or through a mid-columnellar incision as shown in case No. 2.

In using autogenous grafts from the iliac crest, the period of time from removal of the graft to insertion into the nose should be as short as possible to avoid drying of the cells.

5. When the rhinoplasty has been successful most patients adjust themselves quickly to their newly shaped nose. Some are even elated. Most of them acquire new self confidence.

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Article

Responsibility in the Operating Room

Kenneth R. Trueman, M.D.

It is proper to say that the evolution of the operating room followed a miracle of relatively modern times. It could not have happened without Pasteur and his demonstration of the germ theory of fermentative changes. Therefore, it was not until 1874 that Lister, writing from Edinburgh, was able to express to Pasteur his highest, personal gratification and the great indebtedness that surgery must owe him because of the discovery of the principles of antisepsis based upon the germ theory of putrefaction. With infection at last controlled in operative surgery there followed an almost complete freedom from putrefaction in operative wounds which so often led to death in former times. Technical advances in surgery which could be applied to the care of the sick and injured developed rapidly. Some of these advances, however, could not be fulfilled because of inadequate methods of anesthesia until the past score of years brought in the golden age of anesthesiology.

The happy combination of asepsis and modern surgical and anesthetic skills finds operating rooms in all parts of the globe the scene of important and life-saving procedures performed with a high degree of safety and success. An example may be found in the records of our own hospitals. Thus, in the Winnipeg General Hospital during 1955 more than 8,300 surgical procedures were undertaken, the majority of which required a general anesthetic. The mortality rate depending upon the number of those who died in hospital following surgery was less than 3.5 per cent. This is to us, and certainly it would be to Lister, a most gratifying result when it is realized that many patients were seriously ill, due to the inroads of their injuries or illness and because they were at the extremes of age.

It is reassuring, furthermore, to know that of all the patients submitted to surgery throughout all the hospitals in Winnipeg in 1955, only 13 died in the operating theatre. Of these, over half succumbed undergoing a surgical procedure for some defective heart condition in a field of practice which is yet in the early stages of development.

The modern operating room is really not designed to be a theatre. Building costs partly dictate that the room should be moderate in size, but emphasis on antisepsis also discourages the presence of observers and visitors at operations. No doubt in the future, television of important operations will be the method of choice in demonstrating technique apart from actual participation in the operation. Operating room windows are never

opened because of the likelihood of dust-borne contamination. Hence, the main source of illumination is artificial, while automatically controlled air conditioning provides a pleasant climate for the operating team. Time, represented by an electric clock, is still the surgeon's implacable adversary. Speed formerly was the hall mark of a good surgeon, and haste was necessary when operating upon poorly prepared patients under indifferent anesthesia. Although better preparation and anesthetics now permit more leisurely operating, laggardly, drawn-out procedures increase the risk of surgery. Furthermore, the competition for time in the regular schedule is often quite intense which may lead to pressure upon the operator when cases run overtime.

The personnel within the operating room will vary with the technical problem involved. There is always one nurse (and two may be required) gowned and gloved, to set up the material needed in the procedure and assist the surgeon. In addition, a nurse circulates about the room managing a variety of duties, but never actually in contact with the operation itself. The surgeon may require no assistant or may need one or several, depending upon the case. The first or chief assistant may be an associate of the surgeon, the practitioner who has referred the patient, or a doctor training in post-graduate surgery. Other assistants may be internes. The anesthetist pursues his own duties at his station at the head of the patient. Here he keeps abreast of the operation by observing and by progress notes with the surgeon.

To the uninitiated the preparation for a surgical procedure may appear complicated. This is partly because of the large amount of linen and the great variety of instruments required. Although many of the latter are used in all operations, special ones are necessary for specific operations to which must be added certain instruments and sewing materials, catgut, silk, wire, etc., favored by the individual operator. Sponges or swabs are made of multiple thicknesses of gauze. They vary in size and shape. The large ones are used for packing organs away from the operative field, while smaller ones are for wiping and absorbing blood. Whatever their size they are potential trouble-makers as they can become hidden within the patient or lost track of in the theatre, despite greatest caution. Sponges to be used within body cavities should have a radio-opaque ring or threads so that they can be identified by x-ray examination, should they be left within the part. Before the operation the sponges are counted and re-counted by two nurses. As they become soiled they are discarded to the circulating nurse. At the end of the operation the sponges again undergo

a double check by the nurses. All the material used is sterilized before use to assure freedom from infection.

As the purpose of the operating room is defined to be for the practice of healing injuries, deformities and other disorders by manual operation or instrumental appliances, so a surgeon by definition practices the art of healing by manual operation and surgical procedure. The dictionary, however, does not indicate who may practice surgery. A license to practice all branches of medicine is provided by the College of Physicians and Surgeons of Manitoba to anybody receiving a medical degree from our University. It is generally agreed, especially in the medical profession, that the advances in surgery are such that the specialty cannot be properly mastered without a prolonged training even in a branch of the specialty for four to six years under proper supervision. Completion of such a programme by a surgeon may be regarded as an indication of his proper training and for his recognition by some legally established agency for certification or fellowship in the specialty. In some countries, e.g., South Africa, it is a contravention of law for a person lacking such training and experience to practice surgery beyond that for which he has been trained. In that country in cases regarded as emergencies and, therefore, needing the best attention, a grave responsibility rests upon the medical practitioner to decide whether, under modern conditions of travel, the risk of sending the emergency case to a centre where skilled attention and good facilities are available is not less than the risks of emergency surgical treatment locally. This suggests that South African authorities hold that the practice of surgery is complex and difficult and that a great responsibility is involved in the protection of the people of that country through provision and use of the most reliable surgical service possible. It is, perhaps, impossible to apply this principle in rural Canada where vast distances and an uncertain climate require local doctors at times to face responsibilities of a surgical nature for which they are not especially trained. Indeed, this principle has not yet been entirely adopted in urban practice either. It is still possible for non-specialists to undertake some types of procedure in our city hospitals for which they are not especially qualified. This is so because the hospitals in Winnipeg and elsewhere have been available to all licensed medical practitioners for the care of their patients. This is in contrast to a system whereby the hospital privileges are available to doctors only according to their qualifications. As elsewhere in large cities, the trend in Winnipeg appears to be in the direction of limiting surgical practice. This action has been sponsored by the Joint Committee on Hospital Accreditation with representatives of the Canadian Hospital Association and the Canadian Medical Association, the American College of Surgeons and the American

Hospital Association. A closed hospital situation exists rigidly in England today and to some extent throughout Canada, especially in hospitals attached to the Universities. This trend is in agreement with the proposition that a hospital authority holds itself out to the public as providing an institution where patients will be able to meet with skilled persons who will attend and treat them. Hospitals are, therefore, under a duty to appoint properly qualified medical as well as nursing staffs and auxiliaries.

In addition, two measures have been adopted by many hospitals, including those in the Winnipeg area, to protect their standards and patients. The first is the Tissue Committee, composed of the Pathologist of the hospital and several members of the surgical staff. One of its purposes is to review organs removed at operations. After allowance for a reasonable degree of error, the committee is in a position to judge the fitness and perhaps the principles of the doctors using the hospital in relation to the experience of the hospital staff as a whole. When the conduct of a doctor is in sharp variance with that of the others, he is placed in a position where he must justify himself or receive a reprimand or perhaps lose the privileges extended by the hospital in part or in all. The other measure involves a regular review of the circumstances attending the death of all those who have died in hospital after being subjected to surgery. Such meetings are attended by all members of the surgical staff and those others involved in the case, e.g., the anesthetist. The indications for surgery, the methods used, the care of the patient following operation and the autopsy findings are all described. The surgeon must lead the discussion and vindicate his conduct of the case. The presence of the Tissue Committee tends to limit unnecessary surgery with special reference to appendectomies and procedures on the ovaries and womb. It is obvious that such measures as these must act as a surgical conscience, restricting surgery by casual operators and resisting those who may undertake surgery without due consideration of the interest of the patient.

The foregoing is set down to indicate how the surgeon must prepare himself to meet his responsibilities and what means doctors generally are seeking as a profession to protect the patient. But the surgeon must carry his obligation further. It is not sufficient that he be only a good operator. It is frequently stated that surgery has become so perfected that it is safe for the patient so that now the patient must be made safe for surgery. This means that although the vast majority of patients are well enough to tolerate an operation well, there are others who are in no safe condition to undergo one. They have become so weakened and wasted by disease that important measures must be employed to prepare them for their ordeal. Thus, tissue changes due to age or malnutrition associated with conditions of the stomach or bowel,

uncontrolled diabetes or damaged heart, kidneys or lungs must be reversed when possible or else the operation may end in calamity. Surgeons must keep alert for the presence of such associated conditions. When present their treatment is often best handled by a physician. This is based upon the principle that so much progress has taken place in medicine that it is not possible for one man to possess and employ more than a small fraction of that knowledge. This point alone justifies the need for teamwork in the total care of the seriously ill patient. It also reduces the surgeon's responsibility while improving the patient's chance for a successful outcome. Further to this the surgeon is in the best position to direct his patient to where he will receive the best in anesthesia and ancillary hospital services. The competence and conscientiousness of the operating room and nursing personnel are items of prime importance in operations of a serious nature and represent the surgeon's best protection as well as that of the patient.

Although anaesthesiology may look back a hundred years to the first use of ether to induce sleep, its greatest strides have been made in comparatively recent times. As a result of a number of notable contributions, very important avenues of surgical endeavor have been opened up, while generally all surgery has benefited in many ways.

As a result the status of the anesthetist has changed. Not so long ago his methods were simple and his agents limited to ether and chloroform administered drop by drop onto a gauze mask applied to the patient's face. No lengthy training was required and his services were obtained on a part-time basis by the hospital. The introduction of spinal anesthesia, which is now infrequently employed, the availability of more volatile and, therefore, more dangerous gases together with medications for relaxing muscles and controlling blood pressure level and also the induction of sleep have transformed the scope and efficiency of the practice of anesthesia. Furthermore, the anesthetist is not only at variance with his predecessor because of the improved character of his armamentarium, but he has advanced beyond him in the degree of his responsibility to the patient, and finally there is a change in his economic position.

Thus, for the most part, the anesthetist is no longer a hospital employee. Like his medical and surgical colleagues his professional services are on a fee for service basis. He renders his bill and makes his own collection. The consequence of this is his acceptance and expectance to take full responsibility for his clinical acts which formerly were regarded as part of the obligation of the surgeon and the hospital due the patient under their care. During the operation the anesthetist must do two different things. The patient must be kept asleep and his reflex muscular activity must be controlled. The basic sleep in modern

anesthesia is usually provided by breathing Nitrous Oxide with Oxygen. This is quite safe but not a very potent anesthetic agent. Therefore, it is usually necessary to supplement it by repeating small doses of hypnotic drugs such as pentothal and pain killing drugs derived from opium and the like. They are administered intravenously. A typical modern anesthetic for a serious operation, therefore, consists of gaseous agents delivered from quite a complicated machine, supplemented by several powerful and highly specific drugs given intravenously. There are also drugs for reducing blood pressure in order to lessen bleeding and others for raising it if necessary. Without such balanced anesthesia many of the severest operations could hardly be performed safely. Accordingly such methods carry some element of error and disaster. One of the main dangers is in the multiplicity of powerful drugs used. The anesthetist may have before him as many as six syringes charged with different drugs during a difficult case. There is then the obvious possibility of error. The wrong drug may be given or an over-dose of the correct one. This last danger is particularly possible where an inexperienced anesthetist is anxious to produce perfect conditions for the surgeon. There are also potential dangers whenever a complex anesthetic apparatus or machine is in use. Death or injury may be suffered by the patient if it is wrongly set up or a tap is accidentally turned on during the operation. Accordingly, a careful and prudent anesthetist will check that his machine is correctly set up prior to the procedure. Beyond that he cannot guarantee that some latent defect does not exist which may lead to an explosion from the discharge of static electricity or a tap will be accidentally opened by some person during the administration of the anesthetic without his knowledge. Finally, as repeated injections must be given as well as blood and other fluids into the veins in severe cases, the arm of the patient may be placed in a certain amount of potential jeopardy. Usually the veins of the hand and arm are most suitable as veins of the feet may be difficult to use and the foot is relatively a long distance from the head of the patient, where the anesthetist must remain as much as possible. The danger of arm injury due to the position of abduction under anesthesia should now be generally known throughout the medical profession. Nevertheless, a painful palsy may occur as the result of the administration of fluids into a vein in the arm or hand over a relatively long period of time. Although the resulting damage is usually the liability of the anesthetist or surgeon, whoever was responsible for the positioning, this is not always so. Circumstances which may affect the life of the patient may demand an immediate blood transfusion, and may require the patient to undergo some risk of injury due to faulty positioning of the arm.

The anesthetist should protect the unconscious patient from injuries. Thus, where dental extractions, tonsillectomies and mouth operations are performed under general anesthesia without a tube in the trachea, a throat pack is necessary. This is to prevent the entry of blood, tissue or vomitus into the air passage, a situation which may lead to death. The proper use of such a pack demands that a portion remain outside the mouth in order to avoid its loss by inhalation and in this position it acts as a reminder for its removal when the operation is completed. The anesthetist may also become involved in a serious situation, should he undertake, at the request of the surgeon, some task beyond his personal duties, and should anything go wrong at that moment with the anesthetic or related matter under such circumstances, the anesthetist appears to be responsible for the mishap. Nevertheless, the situation would appear to involve the surgeon morally, at least, and perhaps legally, because he distracted the anesthetist and possibly was in a position where it was difficult for the latter to refuse him. It would appear wise for the anesthetist to remain within the precise orbit of his duties unless there is a situation of real emergency.

Again, in the matter of protecting the anesthetized and therefore helpless patient, it must be borne in mind that certain stages of anesthesia are characterized by stimulation and restlessness. Falls from operating tables, stretchers or beds are known when proper supervision is not maintained. Such supervision is the responsibility of the anesthetist until such time as the patient recovers or has been placed in the care of some other capable person.

Something has already been said concerning the position of the hospital relative to the provision of proper professional and non-professional staff. In addition, it is under obligation to provide proper appliances and to maintain in fit working condition through regular inspection and overhaul, as frequently this equipment is a source of danger and injury to patients. Within the operating room precautions are to be taken to prevent accidents such as explosions, resulting from the discharge of static electricity which can happen in an overly dry atmosphere in the presence of a volatile anesthetic. Such precautions involve the erection and equipment of the operating room. Of chief importance are the installation and use of suitable grounding devices with special reference to flooring. Actually the frequency of explosions during operations is greatly overrated and is of the order of one in 485,870 for all types of anesthesia. Furthermore, the chance of dying from an anesthetic explosion is less than one in 7,500,000. The drama of fire and explosion in the operating theatre is said to be greater than that attending an atomic explosion. The reason for this at the present time is that atomic explosions are more

frequent, albeit still rare, and so are now less wondered at.

Nurses in the operating room are almost always employed by the hospital. Like the anesthetist, they too, have their particular duties, some of which have been described. The prevailing attitude towards her position is that the hospital is responsible for her professional as well as other duties. The idea that a nurse is at one moment a servant of the hospital while she is not at another, is no longer acceptable. No doubt exceptions to this principle must present themselves, as for example, during the stress of an operation the first thing required of a nurse would be an unhesitating obedience to the orders of the surgeon. In such a circumstance should injury befall the patient and negligence shown, it would appear the hospital should escape liability which then falls upon the surgeon. As regards internes, the same rule should apply. Thus it may be understood that a surgeon who permits an assistant, or perhaps another practitioner, to treat a patient when he is aware that the assistant is not capable of rendering that treatment, must assume responsibility himself and is guilty of malpractice, should harm come to the patient because of the assistant's negligence or lack of skill. It should be clear that doctors and hospital authorities responsible for the teaching and training of internes and students are charged with the duty of assuring that no patient suffers as the result of being subjected to a treatment which is beyond the competence of the interne, or what may be reasonably expected of him.

The foregoing has attempted to annunciate certain broad principles which bear upon the competence of those who share responsibility in the operating room. In addition there should be mentioned, more specific points of responsibility which may involve the surgeon or the anesthetist or the nurse personally. Some of these are as follows:

1. Second Opinion

Although the surgeon is generally in a position to make his own decisions regarding a case, circumstances may occur where doubt or difficulty make it incumbent upon him to obtain another opinion, unless the case is an emergency. In particular, it is generally advisable to obtain a second opinion when possible before deciding to undertake an operation or a treatment which may endanger life. This is especially so also if the condition is unusual or the treatment is of the nature of an innovation or which may lead to termination of a pregnancy. In the English case of *Rex vs. Bourne*, the latter was a well known consulting obstetrician and gynecologist who was charged with wrongfully procuring an abortion. In answer to a question in court as to why he operated without obtaining a second opinion, he declared that in such cases his opinion was usually the second

one and he saw no reason why it should not be so in this case also. It is not every practitioner who can speak with such confidence although, in his case, Mr. Bourne was acquitted of the charge. In a similar situation, another defendant took the same view when he declared, "In our wards in a hospital we are consultants and unless we are in doubt we do not ask our colleagues. I was not in doubt."

2. Informing the Patient of his Condition

It cannot be suggested that it is wrong to keep information of his condition from the patient if the practitioner is satisfied reasonably that it would be better for him if he did not know. It is felt, however, that the situation is clearly otherwise where the concealment is unreasonable. Thus it has been held blameworthy to conceal from a patient that a foreign body, such as a broken needle, remained in his body when he left the care of the surgeon. However, if the patient's condition makes it inadvisable to tell him immediately, it would appear justifiable to withhold the information from him for the time. When he is well enough he should be told of the facts.

3. Innovation

The fact that a case is treated in a new or novel way should not be evidence of malpractice. It is generally accepted that new methods are constantly being introduced into medical practice. It is common, indeed, for the lay press to make new information known to the patient before the doctor comes across it in the medical literature. To suggest the surgeon has rashly or unjustifiably employed a new and untried mode of treatment, can only depend upon the circumstances of the particular case. It is obvious he should acquaint himself with all the known facts about the new method. Furthermore, he should explain to the patient the nature of the treatment and any known risks it may involve. Certainly there will be less objection to trying something new where there is greater risk, if all accepted methods have been unsuccessful.

4. Use of Old Methods

This question is the converse of that on Innovation and very similar arguments apply. Thus, if a method of treatment which was once accepted becomes out-moded as compared with more recent methods, the question of malpractice can only be decided on the facts.

5. Instruments or Swabs Left in the Patient

The possibility of a sponge or an instrument being accidentally left within the patient has been described. Of course, the greatest care is taken to prevent such a calamity, but the possibility of human fallibility may render it of no avail. The foreign body is usually discovered, either because it eventually works its way out of the patient in some way, or because it causes symptoms sufficiently severe as to require investigation, and further operation. Although at first blush the

condition appears to be the result of sheerest negligence, the facts of the case may not always support this contention.

The fact that a sponge is missing may or may not be recognized. When it is brought to the attention of the surgeon that something is missing he undertakes a search of the body area he is treating. When it is obvious he cannot locate the sponge, it is because it is lost elsewhere in the theatre or it is so small that it has lost its identity through absorption of blood and serum that it cannot be distinguished by feel or sight from its surroundings. The operator can reasonably search only so long when danger to the patient must result from the prolonged handling of viscera and the continuing anesthesia. Should the patient's condition appear to deteriorate the search must be terminated at once by closing the incision, otherwise the surgeon gambles on the recovery of the sponge against the life of his patient. A careless and incomplete search for a sponge lost within the body must be regarded in a different light from the loss of one during an operation performed under more stringent conditions preventing the thorough search indicated.

A different situation involves the assurance by the operating theatre nurse that all sponges are accounted for. In such a case the surgeon undertakes only a cursory examination prior to closing the wound, as it would seem reasonable to rely on the nurse's sponge count. This precaution would be inadequate if the nurse was inexperienced or some doubt existed about the adequacy of the operating room staff. On the other hand, if the surroundings were those of a modern hospital with experienced nurses and attendants, the surgeon ought to be entitled to presume that they had attended to their ordinary duties without instruction. However, in most instances, a defence based upon such a presumption has failed to convince the courts which have held the surgeon is responsible for the acts of hospital nurses performed under his immediate supervision.

Where a foreign body, such as a sponge, forcep or needle is known to have been left within a patient, the latter, or another responsible person should be immediately informed and preparations undertaken for its removal should be made, if indicated, as early as possible.

6. Operating on Wrong Part

Errors of this kind are so clearly unreasonable there can be few grounds for defense by the surgeon. Cases are known in which a healthy kidney, eye or limb have been removed, or in which the wrong side has been operated on for hernia. The utmost care should be taken not to confuse left with right, fatally easy if attention is relaxed.

7. Ischemic Contracture

This condition has been described as the bugbear of orthopedic surgery. Here the application of a tight tourniquet for too long a period

during an operation may so deprive the part of blood that it never recovers and the tissues become shrivelled and functionless. The same may follow the application of a plaster cast to a fractured limb. Although negligence may often exist, it is known that the condition may occur despite vigilance and utmost care.

8. Necessity for Consent to Operate

This should be obtained (especially if the patient is unconscious or a minor) except in case of emergency when it may not be possible to contact a member of the family. In the presence of an emergency, operation should not be delayed. In such a case consent is said to be implied. However, it is advisable in such circumstances for the surgeon to obtain a consultation for his protection and that of the hospital. In the case of married women the possibility that an operation will or may lead to miscarriage, abortion or sterility it is obviously advisable to obtain the husband's approval. Furthermore, the husband's authorization is useful in other types of surgery as well, in order to eliminate any risk of dispute over hospital and medical accounts.

Occasionally in the sphere of surgery, cases occur in which considerable difficulty arises, especially where an operation has been extended beyond the original consent of the patient. It is possible that at appendectomy, a diseased ovary or both ovaries require removal. The matter should be decided by expert evidence whether there was truly such an emergency as to demand the extreme action undertaken without consent. The findings of the pathologist in such circumstances are of utmost importance. Where the matter involves life or death there is not much difficulty and it is recognized that drastic action may be demanded. Therefore, it might be presumed that a surgeon is not guilty of assaulting a patient if he operates in such a case, even without the consent of the patient. Such a case is described when a patient was diagnosed as having a strangulated inguinal hernia. She refused operation even when the danger that the condition might well lead to death was explained to her. The surgeon was determined she should not die and having anesthetized her, performed the necessary operation. After her recovery, she sued the doctor and was awarded a penny damages. However, where life or health are not at stake, the problem of operating without consent can be very troublesome. Ac-

cordingly, it is well that the practitioner makes it clear to the patient that he must be left at liberty to do what he finds necessary and that he will exercise his discretion reasonably so that misunderstandings are less likely to occur.

In conclusion, it may be agreed that the responsibility involved in the practice of Medicine generally is great. In the operating room it is even heavier. Decisions of consequence must be made frequently with little time for reflection, and without consultation. It is surprising that serious misfortunes do not occur more often. When they do, a suit for damages may occasionally follow. Where it can be demonstrated that the performance of the doctor has fallen short of the required standard—which is usually the average or local standard—no matter what the degree may be, he is liable for the consequence. Although this is as it should be, it is interesting and somewhat reassuring to note how liberal the interpretation of the facts may be by the courts. Great emphasis is given evidence which indicates the doctor did his best for his patient under the circumstances. Leniency is allowed for honest error. As Medicine is not regarded as being an exact science, it is accepted that rules regarding situations cannot always be applied rigidly and without reservation. Thus it is noted in a judgment handed down by the late Mr. Justice Mignault, that the practice of Medicine and Surgery "is indispensable to humanity and should not be fettered by rules of responsibility so strict as to exact an infallibility on the part of the doctor which he does not possess." Further to this, another judge said, "We would be doing a disservice to the community at large if we were to impose liability on hospitals and doctors for everything that happened to go wrong. Doctors would be led to think of their own safety, rather than the good of the patient. Initiative would be stifled and confidence shaken."

In the preparation of this paper the writer wishes to acknowledge the free use of the following:

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Social News

Reported by K. Borthwick-Leslie, M.D.

This is being written to the accompaniment of a play by play broadcast of the heroic battle by our Firemen to control the spectacular destruction of the Revenue Building and School of Arts. Saving the irreplaceable records of the Motor License Department seems to be well under way, so those "suspended drivers" may not be so lucky after all. What a mess. Can't make up my mind whether to be sorriest for my old friend Bob Baillie (we were classmates in Arts, in that same historic building), the hundreds of now homeless pigeons or the Art students, most of whom can ill afford the inevitable damage to supplies and equipment.

Congratulations to Drs. N. P. Merkeley and Colin C. Ferguson on being honored by the American College of Surgeons. Plaques were presented to them at a banquet in their honor by Cameron Stuart of North America Cynamid Ltd. in recognition of their film "Hernia in Infants and Children," first shown at the Annual Clinical Congress in San Francisco. The film is designed for educational purposes, internationally.

From all reports the first scientific congress of the College of General Practice in Canada, in Montreal was an overwhelming success, both in attendance, organization, enjoyment and papers, "par excellence" by speakers of international renown. A mighty tough precedent for our Manitoba Chapter to live up to next year; "up and at it" fellow G.P.'s, lets get behind our President Jack McKenty and the Committee in charge and help in any way we can. Never let it be said the East can show up the Gateway to the West.

Judging from all comments Drs. Lennox Bell and Harry Medovy covered us with glory at that meeting, otherwise no gossip. Apparently all our members behaved themselves.

The Annual Meeting of the Manitoba Branch of the Federation of Medical Women of Canada held in March, in honor of the graduating girls was also an unqualified success.

Reception at the home of the retiring President, Dr. Dorothy Hollenberg, followed by an excellent dinner at Llentrad Harbor were most enjoyable.

The new slate of officers is: President, Dr. Ruth Mathers; Vice-President, Dr. Marie Storrie; Secretary, Dr. Donna Randle; Treasurer, Dr. Emma Adamson. Address and presentations to the graduates by Dr. Margaret Owens, followed by a travelogue and marvelous movies by Drs. Marjorie Bennett and Ellen Taylor, of their trip to Switzerland in '56, attending the International Congress of Medical Women.

Speaking of our Medical Women, they seem to be somewhat disturbing to the elements.

1954 — Hawaii — Marlatt, Armstrong and K. B. Leslie—Volcanic eruptions.

1957 — Hawaii — Marlatt — Tidal waves.

1957 — San Francisco — Dorothy Hollenberg — Earthquakes.

1957 — Montreal — Chris Curran—No report as yet.

Congratulations to, and Heaven help Dr. Molly Markovits (nee Hendin) who has been appointed Medical Health Officer for Transcona, Man.

The Manitoba Clinic announces the arrival of Muriel E. Port, M.B., M.R.C.P., formerly of St. Mary's Hospital (Medical School of the University of London, and the Wright Fleming Institute of Microbiology London). Dr. Port is now associated with the Department of Internal Medicine at the Clinic. Welcome to Winnipeg, Dr. Port.

Dr. Fischel Coodin is now located at 514 Boyd Bldg., phone 93-7734. Practice confined to Diseases of Children.

Dr. Charles F. Code, '34, co-chairman of the Section of Physiology in the Mayo Clinic, Rochester, and professor of Physiology in the Mayo Foundation, Graduate School U. of Minnesota, participated in "Medical Horizons" program telecast, January 13, 1957.

The marriage of Emilie, daughter of Mrs. Stephensen and the late Dr. O. Stephensen to Dr. Robert Black was solemnized March 30th in St. Andrew's River Heights United Church. Following an extended motor trip to Arizona and California, Dr. and Mrs. Black will reside at 94 Brock St.

To our babies, welcome and good health:

Dr. and Mrs. Alex Malkin, on March 12, 1957, Ian Rael, brother for Tannis and Mark.

Dr. and Mrs. R. H. McFarlane, March 13, 1957, a son, Ronald Bruce.

Dr. and Mrs. C. N. Edwards, Sarnia, Ont. (nee Joyce Greene) announce the birth of a second son in Winnipeg, March 3, 1957.

Dr. and Mrs. Norman Helgason, Cavalier, N.D., a son, Norman Paul, March 8, 1957.

Dr. and Mrs. E. N. Cole, Boissevain, Man., announce the arrival of Catherine Jane, March 27th, 1957. Thank you to Drs. Don and Ethel McPhail).

Dr. and Mrs. Robert Ramsay happily announce the birth of twin sons, March 27th. Hockey? Baseball? Surely not Rugby, Bob. Think of the housing situation.

Drs. Elizabeth and John S. Etherington proudly announce the arrival of David William, March 17, 1957.

What do you know, a doctor with luck. Dr. V. W. Sobey, Deer Lodge Hospital won a new Dodge, recipient of the March of Dimes car award. In the picture the car seems a nice background for his grin.

Did you read the most enjoyable pen portrait of Gisele (LaFleche) Mackenzie in Saturday's Tribune? Did you see that shy "bursting with pride" expression of Dr. LaFleche's?

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1. Simon, S.W. 2. Sternberg, T.H. (personal communications)



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Editorial

S. Veisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor

Love Me Tender

The fancy that in the spring of the year lightly turns to thoughts of love is the fancy of a young man, not that of an ageing editor of a medical journal. Clipped of the wings of youth, the sluggish editorial fancy does not readily take flight into the exciting skies of romance. If it turns at all, it is to thoughts **about** rather than of love, thoughts that are dry, detached and devoid of emotional content. It concerns itself with dispassionate definitions and dissecting analysis. It focuses its attention, not unexpectedly, on aspects of love, which bear a relationship to clinical medicine.

What is this thing called love? As the unsteady hand reaches for the dictionary in search of a definition, it hesitates. Will the impersonal glossary be able to compress the meaning of a term so complex and emotionally charged into a brief defining sentence? It would, indeed, be surprising if it did. Unsurprisingly, it does not. "Love" it states succinctly is "ardent affection." Is it worth while looking up "affection?" Hardly, for the definition will likely be—"lukewarm love."

Perhaps a better source of information about love is the popular ballad. After all, love is the very life blood of song. What, then, have the bards of Tin Pan Alley to offer in the way of definition of love? The answer is as obvious, as it is simple. One need only look at the titles of some of the currently popular lyrics to realize that love is the very essence of simplicity. "Love me tonight," "Love me, tease me, squeeze me," "Love my lips, love my hips," "I love your loving"—are but a few samples conveying all too clearly their unsophisticated message of "true" (the real McCoy) love. Shall we settle for this? Or shall we continue our search for a more satisfying conception?

Let us turn to the vox populi, the voice of the man in the street, as he bandies about the word love. Here love, as often as not, is divested of all sexual connotation. The term is used loosely. Women love chocolate cake, men love Pandora cigars, children love popsicles. Inanimate objects partake of the blessings of love as freely as human beings. This dilution of the meaning of love leads to its ultimate loss of all significance.

Shall we, perhaps, seek enlightenment from the philosophers, the poets, the religious mystics? They are all much concerned with love. As early as 450 B.C. Empedocles postulated that love is the principle that brings elements together. "All things that are more adapted for mixture are like to one another and united in love by Aphrodite"—states Empedocles—"It is she that is known as being implanted in the frame of mortals. It is she

that makes them have thoughts of love and work the works of peace." Aristotle speaks of love as the principle that governs the movements of the spheres. Spinoza writes of "Amor Dei Intellectualis." Religious mystics exult in the love of God. Poets are preoccupied with love. They extol it, they glorify it, they sublimate it. But neither philosophical speculation, nor mystic ecstasy, nor poetic insight can fully satisfy the curiosity of the scientific inquirer in the quest of a precise definition.

There still remains, of course, an authoritative source of information on all matters pertaining to emotion—namely analytic psychiatry. The latter, to be sure, has not overlooked love. Freud's theory of sex equated with the libido, the life force, of which love is but a manifestation, is well known. Less known are the more comprehensive views expounded by Freud's successors. Perhaps the most noteworthy contribution to the psychoanalytic approach to love is that made by Phillip Solomon (New Eng. J. of Med. 252: 9, 345, 1955). Starting with the assumption that self-love is the basis of all love, he traces the development of the higher forms of love from this lowly foundation. Self-love, according to Solomon, is an instinct displayed by all living organisms. It is one-dimensional, its location always being the self and its only variable the intensity. It comprises all the sensuous pleasures, aiming to engulf and incorporate. From this "love of me" are projected the love for the mother, which is the love for "what I am part of," love for the child, which is the love for "what is part of me," and the love for a brother for "what is like me." These three varieties of projected self-love are no longer one-dimensional, for to the dimension of the intensity of emotion has been added that of the direction in which it is expressed.

A third dimension, that of "what might or ought to be" is added in yet another type of love—the ideal self-love, of which adolescent hero worship and romantic love are but two offshoots. In the former variety the adoring adolescent identifies himself with the hero, who fulfills his "ego ideal," the hopes, ambitions and high standards, of which he himself falls short. In the latter variety, romantic love, the infatuate finds in the object of his affection someone who regards him as the ideal person he would like to be. What the lover really loves is not his inamorata, but the idealized self that he wishes he were, which she sees in him. It is love of "what I should like to be."

The ultimate in love, its highest manifestation, according to Solomon, is the four-dimensional "mature" love of a happily married man. The

fourth dimension in this love is that of Time. The happily married man shares with his wife common interests, plans, aims and ambitions, which involve the future. This is love for "what I should like to become."

Solomon (Boston, not Jerusalem) in his wisdom has titled his masterly analysis—"A Clinical Definition of Love," thus emphasizing the close relationship between Love and Clinical Medicine. Although this interrelationship often escapes our attention, it must be obvious that a field of human endeavour as wide in its range as Medicine could not have conceivably been bypassed by an emotion as ubiquitous as love. Indeed, some cynics would relegate all of love to the realm of Medicine, contending that love itself is a disease, a malady with a strong vernal bias. Love sickness to them is not a figure of speech, but a clinical diagnosis. Equally cynical are those who facetiously limit love's encroachment on Medicine only to diseases which so often afflict the worshippers of Venus. Less cynical, but equally unimaginative, are those who see love's impact on Medicine confined to obstetrics, gynecology and often endocrinology. It is obvious that their view of love is a narrow one, more akin to that of a medieval Celestina or Nostradamus, dispensing aphrodisiac love potions and love cures, than that of a broad minded modern physician, appreciative of the wider connotations of love and its impact on the patient. Viewed in its broader aspects, love permeates all Medicine, affecting the patient in every phase of his behaviour. It also affects the physician, who is no stranger to love—love of work, love of knowledge and love of humanity.

Ed.

The Neil John Maclean Memorial Award for Clinical Investigation

The Manitoba Institute for the Advancement of Medical Education and Research announces The Neil John Maclean Memorial Award for Clinical Investigation:

1. Applicants must be graduates in Medicine of not more than 5 years residing in Manitoba. The adjudicating Committee, however, may vary this condition so as not to exclude internes or fellows who have been engaged in general medical service with the Forces or in civilian practice.

2. Residents or internes of teaching hospitals should submit their papers through the Chief or a senior member of the Department in which the work is being carried out. If an applicant is not on the staff of a teaching hospital he should apply directly to the Honorary Secretary.

3. The submitted paper must be based on observations made in large part by the applicant

himself while a resident of Manitoba. Credit will be given for evidence of independent thought.

4. The paper should be written in the style used in an appropriate Medical Journal.

5. The paper must be entirely written by the applicant but in its composition he is free to obtain any advice or criticism which he may desire. Preference will be given to papers with a bearing on medical practice.

6. The applicant may be required to appear in person before the adjudicating Committee.

7. Assignment of the award shall be decided by the Awards Committee of the Manitoba Institute for the Advancement of Medical Education and Research. Members of the Committee will read the submissions and list them in order of preference. The Committee or those delegated by the Committee will make the final decision.

8. Submissions should be in the hands of the Honorary Secretary, Manitoba Institute for the Advancement of Medical Education and Research, 205 Vaughan Street at St. Mary's Avenue, Winnipeg 1, Canada, before May 1.

9. The award will be available annually and will consist of a prize of \$250.00 plus a suitably engraved certificate.

Obituary

Dr. Noel R. Rawson

Dr. Noel R. Rawson, 73, died in St. Boniface Hospital February 27 following an auto accident. Born in Bradford, England, he graduated from the London Hospital in 1911. In the first World War he was a battalion medical officer, then practiced in England and Wales until coming to Canada, where he practised from 1929 to 1931 at Melita, Manitoba. He then obtained the D.P.H. degree from the University of Toronto. In 1932 he was appointed epidemiologist in the Manitoba Department of Public Health. In 1944 he volunteered for a special assignment at Chesterfield Inlet and for his services during a typhoid epidemic at Cape Dorset he received the Order of the British Empire. Following this he became medical director for the St. James-St. Vital-Fort Garry health units until his retirement in 1954. At the time of his death he was acting medical director of the Steinbach health unit.

He had been a member of the first boy scout troop organized by the late Lord Baden-Powell and retained his active interest in the scout movement. He was twice decorated for his outstanding work with the Order of Saint John of Jerusalem.

His wife and a brother survive him.

Association Page

Reported by M. T. Macfarland, M.D.

Economics Committee Report

1. Plans for Hospital, Diagnostic and Other Medical Services

The Canadian Medical Association has recommended that a plan be prepared to deal with:

- (a) Comprehensive hospital service
- (b) Diagnostic services
- (c) Physicians services

This plan is to be based upon the principles pertaining to health matters set up by the C.M.A. at various times and reiterated at the annual meeting in Quebec in June, 1956. Thus, the C.M.A. approves of the adoption of the principle of contributory health insurance and favors a plan or plans which will assure the development and provision of the highest standards of health services, preventative, curative and rehabilitative, provided the plan be fair both to the insured and all those rendering the services. It also recommends that where it becomes evident that the voluntary medical care plans cannot achieve adequate coverage, provincial governments collaborate in the administrative and financial task of extending health insurance to all through the medium of the voluntary prepayment plans. The C.M.A. believes that the responsibility of the community for health services includes the assurance that adequate medical facilities and services are available to every member of the community whether or not he can afford the full cost. In keeping with the principles of medical practice it is highly recommended that the confidential nature of the patient-doctor relationship remain inviolate. The patient must have free choice of doctor and the doctor free acceptance of patient.

The foregoing pertains to medical services but the C.M.A. feels that doctors, with their special knowledge and experience should be in the best position to help solve the problems of hospital services. This means not only advice as to where hospital units, whatever their size or type, should be situated but that doctors are best qualified to indicate how the hospital may provide the services most required by its community. Thus, the profession could co-operate well in matters pertaining to diagnostic facilities, active treatment, rehabilitation, medical education and hospital administration.

The foregoing was agreed to by the C.M.A. prior to the proposals presented by The Honorable Mr. Paul Martin for the Federal Government. These proposals, however, point out the proximity government participation has reached in its extension into health services. There can be little doubt that a brief time only can elapse until the proposals of Mr. Martin or alternative plans will be

accepted by provincial governments across the nation. Therefore it is proper that prior to the introduction of legislation dealing with hospitalization or other health insurance matters, there be adequate consultation between organized medicine and other groups affected. It is recommended that such consultation take the form of a non-political commission representing the provincial government, hospital association, the medical profession and the public. The representatives from the medical profession would be chosen with the approval of the medical profession of Manitoba. The details of size of the commission, tenure of office of its members, appointment of chairman, remuneration, etc., would be determined by representatives of the various bodies involved.

At the present time medical services do not appear to be involved. This, however, does not apply to diagnostic x-ray procedures and laboratory work, viz. biochemistry and pathology. Specialists in roentgenology and pathology also regard themselves as providing medical services and this contention is supported by the C.M.A. while as specialties they are recognized by the Royal College of Canada. The present position the hospitals occupy of seeming to provide these so called diagnostic services appears to be weakened. This is because x-ray and laboratory specialists are preparing to replace their contracts with hospitals for a fee-for-service arrangement. Should this be the case the economic position of these specialists will be altered and their services remunerated directly by the patient or some third party such as an insurance carrier or the Manitoba Medical Service. While this evolution is developing both groups are studying possibilities for widening the coverage of their professional responsibilities. If this follows, and it should, the province would be greatly enriched by the extension of these specialties. Here, indeed, is an area where co-operation between government, hospitals and the medical profession could produce a far reaching advantageous effect.

The Manitoba Medical Association should be advised through the Executive that a brief of the nature of the above should be presented to Mr. Bend, Minister for Health in Manitoba, for his study and advice. It should be accompanied by the re-affirmation of the profession that the present voluntary schemes now so largely and successfully employed in this province represent our method of choice in providing against hospital and medical expenses. It should be again directed to his attention that the profession at its national convention in June, 1956, did not support a motion in favor of a universal hospital scheme involving compulsory contributions by the individual

through some method of taxation.

This subject was discussed by the Economics Committee at one meeting to which Dr. Morley Elliott, Deputy Minister of Health, was invited. As a result of its deliberations the following resolution was presented and accepted: "That the Economics Committee recommend to the Executive of the M.M.A. that representation be made to the Provincial Minister of Health for the establishment of a Study and Planning Committee for the purpose of preparing a plan or plans for the provision of basic hospital and diagnostic services. The recommendation suggests that the Committee include representatives from the Provincial Government, the Associated Hospitals, the Manitoba Medical Association and Prepaid Hospital and Medical Care Plans."

This resolution was adopted by the M.M.A. Executive on the 17th February, 1957.

2. Radiology

The Radiological Section of the M.M.A. has submitted to the Economics Committee a brief regarding the status of Radiologists providing diagnostic and therapeutic services to patients in hospitals. The Radiologists are now seeking to practice within the hospitals on a fee-for service basis, with such fees being paid for medical rather than hospital services. This would parallel the change of status obtained several years ago by the Anaesthetists.

The Economics Committee has approved of the fee-for service principle for the Radiological Section. This position was supported by the M.M.A. Executive at its February meeting.

The submission of the Radiologists is of great interest and is reprinted, with minor changes, herewith:

Submission to the Committee on Economics, Manitoba Medical Association from the Radiological Section of the Manitoba Medical Association and the Manitoba Division of the Canadian Association of Radiologists.

Subject: The Unsatisfactory Hospital-Radiologist Relationship in Manitoba:

At a meeting of the Radiological Section of the M.M.A. on January 28th, 1957, attended by a majority of members, the subject of hospital relationship was discussed and a unanimous conclusion was reached.

The following major points have developed as our views and these are presented herewith.

1. We are determined to resist inclusion of Radiology as a hospital service.

(a) Such inclusion is in direct contradiction to the Canadian Medical Association policy stated in 1956, "The C.M.A. reaffirms that radiological and clinical pathological services are physician's services and not hospital care and should be so treated in any insurance plan."

(b) The Canadian Association of Radiologists and the American College of Radiology have

clearly defined the status of radiology in hospitals with full ethical and legal implications. They state that radiological services performed in hospitals are the product of the joint contributions of hospitals, physicians and technicians; but these services constitute purely medical services which must be performed by or under the direction of a physician.

2. We regard the action of the Associated Hospitals of Manitoba, in instituting the inclusive rate to include Radiology, or any other medical service, to be indefensible for the following reasons:

(a) This step was taken without formal consultation with our radiological section or with individual radiologists having hospital associations and without consultation with the M.M.A.

(b) The services of radiologists are being sold by the hospitals to an insurance plan in exactly the same fashion as drugs, dressings, meals, etc.

(c) We believe that the action of the hospital will result in an attempt to control and practice our medical specialty. This will occur just as soon as the expected increased volume of radiological services surpasses the portion of the hospitalization dollar allotted for that purpose. There must be no doubt that there will be a marked increase in the demand and usage of these services. Dr. L'Heureux states in the December issue of the Manitoba Medical Review, "Inclusive rates encourage a thorough diagnosis." We are certain that the rate decided on by April 1, 1957 will not project the increased use of radiology nor can it be predicted accurately enough.

Several radiologists have been unofficially informed by hospital administrators that increased volume will lower unit costs in X-ray departments and that the professional income of their radiologists should be pro-rated accordingly. We are fully aware of cost accounting in X-ray departments and know that increased volume reduces overhead only to a slight degree, relating entirely to space rental and equipment, and to those in recurring limits. Professional, technical and material costs do not enter into this equation except in a very small department such as a country hospital.

Control of fees is always left to the medical profession as a whole. The legitimate concern of the hospital is not how much money a doctor makes but whether the fees to the patient are fair and reasonable.

Dr. Paul L'Heureux has contributed a valuable essay to the medical profession in outlining inclusive rates, as envisaged by the Associated Hospitals of Manitoba. This quote should be remembered, "The hospital has only one thing to sell and that is complete hospital care, not a series of unrelated and professional services."

3. We regard present Hospital - Radiologist Relationship in Manitoba as improper.

Radiologists are aware of their responsibility to patients, staff and hospital administration.

However, our specialty has been unrealistic in the past in contractual arrangements with hospital administrators and we have acted on the basis of expediency rather than on principle. It must be recalled that these institutions operated in a position of near bankruptcy until fairly recently, and we tolerated certain arrangements on this account. We have to accept the responsibility for the status quo ourselves. Nevertheless all present hospital contracts in Winnipeg, with perhaps one exception, are of a "fee for service" type which is acceptable to the Canadian Association of Radiologists.

However, we allow hospitals to collect for our services at present without identification of the physician rendering the service in the hospital billing. This is in contravention of the policy of the Canadian Association of Radiologists and the American College of Radiology, and we will correct this shortly. We have wrongly allowed our services in hospital to be included in Blue Cross and other insurance introducing even a fourth party in our relationship to patients. This is unethical and possibly even illegal and must be rectified as soon as possible.

An example of a predicament in which Manitoba radiologists found themselves last year, was in the directive of the Hospital Rate Board announced to hospitals setting the fees for radiological services for indigent care. These were set without reference to radiologists or to organized medicine in this province. Inasmuch as we have not been billing the patients directly, we have laid ourselves wide open to any third party deal.

Consequences in maintaining the "status quo."

(1) If present radiologists' arrangements are preserved, radiological services would be included in the "Inclusive Rate" of the Associated Hospitals of Manitoba. This may in due course be the official plan upon which a compulsory provincial hospital insurance will be modelled. Radiologists in this case would be the bell-wethers leading the medical profession into socialized medicine.

(2) Inclusion of radiological services in a hospital insurance plan will result in deterioration of the quality of these services. The standards which we now consider essential must be sacrificed when increased volume encounters a rigid budget. Our present members would be very reluctant to engage in hospital practice under these conditions.

(3) We have been keenly desirous of developing and maintaining first-class departments in our hospitals. We contribute much in the maintenance of training arrangements for radiology students and technicians, while joining in hospital staff and university teaching programmes. We envisage the collapse of much of this structure if radiology does not change its hospital character.

The Eventual Remedy

Radiologists must accept hospital arrangements in which their services are recognized as medical

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and that charges for such be billed for by the physician performing them. The hospital must be recompensed, for all of its expenses in maintaining such a department, by the radiologists in some fashion which is mutually acceptable, yet in which the hospital does not share in the professional portion of such radiological fees. This same principle should be maintained in all hospitals, no matter how small, so that radiological fees are always billed for by a physician.

This can be the only method by which any third party interference can be avoided, whether insurance plan, governmental body or agency.

Income Tax Information Convention Expenses

(The following information from The Canadian Medical Association may be substituted for that published on Page 127 of the February, 1957 Review).

"Specific provision for the allowance of convention expenses if made for the first time, insofar as the Income Tax Act is concerned, by Section 3(4) of Chapter 39, Statutes of Canada, 1956, being Section 11(1) (ia) of the Act.

With application to the 1955 and subsequent taxation years, the new paragraph gives authority for the allowance of such expenses to an individual carrying on business or practising a profession, but the allowance is restricted to the expense of attending no more than two conventions in a taxation year. Furthermore, if the taxpayer is not a member of the organization sponsoring the convention, his attendance thereat must have been for business or professional reasons. There are no geographical restrictions in the paragraph and the convention, therefore, need not necessarily have been held in Canada for the expenses to be allowable.

"As heretofore, the expenses to be allowed must be reasonable, and the taxpayer should show:

- (1) The dates on or between which the convention was held, and location thereof;
- (2) The number of days he was present at the convention, supported by a certificate of attendance from the sponsoring organization; and
- (3) The expenses incurred, segregating
 - (a) transportation expenses,
 - (b) meals, and
 - (c) hotel expenses, for which at least vouchers should be obtained and kept available for inspection

"All expenses of a personal nature, including those attributable to the fact that the taxpayer's wife (or husband, as the case may be) accompanied him to the convention, must be excluded from the foregoing.

"No expenses for attending a convention are allowable as a deduction from salary income, since such a deduction is prohibited by Section 5 of the Act."

Professional Policy Committee

It is now possible to report that Dr. Hugh Malcolmson has accepted the appointment of chairman of the P.P.C. The committee has been functioning since Dr. Malcolmson accepted this post in mid-February.

Northern District Medical Society

A meeting of the Northern District Medical Society was held at Dauphin on Thursday, February 21st, 1957.

Present were: Drs. L. Jonat, Swan River, President; M. Potoski, Dauphin, Sec.-Treasurer; M. K. Brandt, Dauphin; R. E. Dicks, Dauphin, H. Little, Dauphin; W. G. Ritchie, Dauphin; B. Symchych, Dauphin; L. J. Stephen, Dauphin; W. Bashucky, Winnipegosis; T. A. Kinash, Gilbert Plains; M. Tanasichuk, Grandview; T. W. Fyles, Winnipeg; D. J. Hastings, Winnipeg; W. A. Maclean, Winnipeg; J. E. Hudson, Hamiota, President, M.M.A.; M. T. Macfarland, Winnipeg, Executive Director, M.M.A.

During the forenoon a Clinical Session with presentation of cases was held in the Dauphin General Hospital.

Following lunch at the Boulevard Hotel, the President of the M.M.A., Dr. J. E. Hudson, who had flown his plane from Hamiota to be present at the meeting, discussed many of the matters with which the Association is presently concerned.

The afternoon session was held in the Auditorium of the Health Unit when Dr. W. A. Maclean, Winnipeg, spoke on the subject of Breast Cancer. Dr. D. J. Hastings, President of the General Practitioners' Association of Manitoba, outlined the difference in organization and function of the General Practitioners' Association of Manitoba and of the College of General Practice, Manitoba Chapter. Dr. Fyles discussed Drug Reactions outlining many of the complications seen following the use of many of the newer drugs.

Following the discussion by Dr. Hudson, Dr. Macfarland elaborated on the amount of work donated by the individual officers and committee members on behalf of the profession as a whole.

Dinner was served in the dining room of the Dauphin General Hospital and a vote of thanks to the Administrator, Mr. Schmeidl, and the Hospital staff, was expressed by Dr. Hastings. Features of the entertainment provided were Ladies' Curling Bonspiel, and a Hockey Game between Dauphin and Minnedosa. Hospitality was provided at the homes of Drs. M. K. Brandt and M. Potoski.

It was agreed that the next meeting be held on Saturday, May 18th, 1957.

North of 53 District Medical Society

A meeting of the North of 53 District Medical Society was held at the Clearwater Lake Sanatorium, The Pas, on Wednesday, February 13th. The day was sunny and fine, with the temperature 15 degrees below zero.

Hosts for the occasion were Dr. E. L. Ross, Director, Manitoba Sanatorium Board, Dr. S. L. Carey, Medical Superintendent, Miss T. Riley, Superintendent of Nurses, and Mr. Carl Christiansen, Business Manager of the Clearwater Lake Sanatorium.

Present were: Dr. S. L. Carey, President; J. Leicester, Secretary; Chornomoretz, The Pas; A. L. Jacobs, The Pas; S. Pogonowski, The Pas; R. F. Yule, The Pas; J. A. Killoch, Flin Flon; C. A. Milanese, Flin Flon; P. G. Premachuk, Flin Flon; W. G. Brock, Winnipeg; M. T. Macfarland, Winnipeg; E. L. Ross, Winnipeg; C. B. Schoemperlen, Winnipeg.

After luncheon at the Sanatorium, an igloo in process of construction by Eskimo patients awaiting transfer to their homes, was inspected. A clinical session was held at which the speakers were Dr. George Brock, Dermatologist, who spoke on the use of Cortisone and Cortico Steroids, and Dr. C. B. Schoemperlen, Internist, spoke on Lung Abscess. Dr. S. L. Carey reviewed the 1956 outbreak of tuberculosis in a settlement along the Hudson Bay line.

Dr. C. B. Schoemperlen and Dr. M. T. Macfarland, First Vice-President and Executive Director, M.M.A., outlined some of the current activities of the Association.

Following a reception at the home of Dr. Carey, dinner was served in the Dining Room of the Sanatorium. A brief business session was held at which Dr. G. N. Willson, Flin Flon, was elected President of the Society, and Dr. P. G. Premachuk, Flin Flon, was elected Secretary. It was decided to have another meeting in October. Appreciation was expressed for the hospitality extended and the meeting was adjourned to permit members to attend some of the attractions in connection with the Trappers' Festival.

Guests were later entertained at the home of Doctor and Mrs. A. L. Jacobs.

Winnipeg Medical Society Report of Nominating Committee For Officers 1957 - 1958

The following report was presented to the Council and accepted by that body on February 11th. Since that time all candidates have agreed to have their names placed on the ballot. The Nominating Committee is pleased to present the following report:

President:

Dr. A. R. Gordon, Winnipeg

Vice-President:

Dr. C. Clark, Winnipeg

Dr. J. L. Downey, Winnipeg

Secretary:

Dr. J. A. Swan, Winnipeg

Dr. J. MacDougall, Winnipeg

Treasurer:

Dr. R. Cooke

Dr. W. J. Elliott

Trustee:

Dr. D. L. Kippen

Dr. J. W. Whiteford



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1. American Medical Association: New and Non-official Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

TABLETS

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Book Reviews

Epileptic Seizures. The Williams and Wilkins Company, Edited by John R. Green, M.D. and Harry F. Steelman, M.D.

This little one hundred and sixty page book is based on the proceedings of the joint meetings of the Seventh Western Institute on Epilepsy, the Western Society of Electroencephalography and the American Academy of General Practice, Arizona Chapter, held in November, 1955. It consists of sixteen relatively brief papers by fifteen contributors, seven of whom are medical men and eight are workers in educational, social or rehabilitation fields.

In the introductory remarks John R. Green, M.D. states "The program has been planned along practical lines for the general practitioner, internist, pediatrician, medical student, educator, employer and parent." It is difficult to understand how one book could possibly appeal to an audience of such widely differing interest and background. In some chapters there is much more than the general practitioner would wish and in others much less. The internist or pediatrician who does not already know as much about epilepsy as is contained in this book should probably not be treating epilepsies. The medical student requires something more basic and better organized. Pages three to ninety-one by the medical contributors will leave lay readers confused. Pages ninety-one to one hundred and fifty-three can be understood by all to whom this book is directed, but the material is not always germane to the subject of epilepsy and could have been condensed considerably without loss of effect.

Although this little book has several good chapters, it falls short, on the whole, of its avowed goal of being "a correlative study of historical, diagnostic, therapeutic, educational and employment aspects of epilepsy," a goal perhaps too ambitious for a book of one hundred and sixty pages.

A.B.H.

Pediatrics. Patterson & McCreary. Lippincott Co. 621 pp. Price \$14.00.

This book is unique in that all but one of its 37 contributions are Canadians, the lion's share going to British Columbia, which contributed 19 authors.

The first 93 pages cover the newborn and the management of fluid and electrolyte therapy. Among the most praiseworthy features of this part are the proper emphasis on hereditary and ante-natal factors, the practical approach to the emotional behaviour of the child, and the clarity of the discussion of the Rh factor. Also commendable is the highlighting of the post-mature syndrome. Prematurity, on the other hand, has

been dealt with rather inadequately. Also regrettable is the lack of a table of available commercial electrolyte preparations in an otherwise good and practical review of electrolyte therapy.

The part of the book dealing with systemic disorders gives an excellent review of the subject of acute diarrhea, while leaving much to be desired in the handling of the subject of constipation.

The chapter on pediatric gynecology as one of the best in the book, as also are the chapters on techniques and procedures. The tables on antibiotic therapy are excellent. The illustrations and drawings are good throughout.

This book has great merits. It is clear in its presentation, it is practical in its approach to therapy and it is rich in references. It is, however, too much like a classical pediatric text to fully live up to its avowed purpose of being intended solely for the physician in general practice of medicine.

Recommended reading.

J. W. B.

Hepatitis and Hepatic Tests: Hans Popper, M.D. Clinical Symposia, Ciba Company Ltd., Jan.-Feb.

It is unusual to be asked to review a publication by one of our pharmaceutical firms. These are often criticized as being more concerned with the commercial than the scientific side of medicine. Nevertheless, it must be said that some of the most concise summaries, the most colorful and instructive pictures and the most useful diagrams are found in the various trade journals. There are even some who are willing to admit that, at least, a portion of their pharmacology has been gained through interviews with detail men from these companies.

The January-February issue of Clinical Symposia, published by the Ciba Company Ltd. is devoted entirely to a short monograph entitled Hepatitis and Hepatic Tests by Hans Popper, M.D. Dr. Popper is a pathologist from Cook County Hospital in Chicago. He has written extensively and learnedly about liver disease and along with Dr. H. Elias is responsible for presenting what might be termed the new microscopic anatomy of the liver. Their concept, which in effect does away with the liver lobule, though controversial, explains many problems in pathological histology.

Of its thirty-two pages, fifteen are full page color plates produced by Dr. Frank Netter. His drawings are well known for their clarity and exactness. In a few, perhaps, simplicity is lost in an attempt to include too much detail on one page, but this is no doubt due to space restriction.

The remaining seventeen pages are a model of trimming away the unnecessary and condensing the known facts. It consists essentially of three parts: a description of the acute parenchymal and ductal infections, the tests of value in establishing or differentiating these illnesses and an approach to their practical application. He aptly points

out that the use of a battery of tests (a liver profile) is not necessarily more accurate than any single examination and must be interpreted "with a qualifying judgment against the clinical background."

This miniature textbook of acute and subacute hepatic disease is well worth keeping for future reference.

J. H. M.

Abstract

The Influence of Some of the Salicyl Compounds (and alcoholic beverages) on the Natural History of Peptic Ulcer. Brown, R. K., Mitchell, N., Gastro., 31: 198, 1956.

In 70 Negro patients with massive hemorrhage from peptic ulcer, the incidence of ingestion of salicylate compounds was 72%. Hemorrhage followed imbibition of alcoholic beverages in 15.2%

of cases of massive hemorrhage. Perforation followed the ingestion of salicylates, alcohol, or both in all 9 cases of perforation. Four patients with continued pain on a medical program became free from pain when salicyl compounds were withdrawn. Ingestion of salicyl compounds and alcohol may be followed by ulcer activity, depending upon local conditions at the time of ingestion. Previous use of salicyl compounds without untoward effects is no guarantee against erosive activity at the ulcer site. Elective surgery for repeated hemorrhages should be withheld in patients in whom these hemorrhages always follow the intake of salicyl compounds and alcohol. Proper labels should be required for materials available to the public containing salicyl compounds.

A. G. Rogers.

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DURACTON

LITERATURE EXERPTS:

ACTH has been compared with cortisone in long-term treatment of rheumatoid arthritis. Best results were obtained in the ACTH treated group. 59 percent of the cortisone treated group showed continued bone erosion, while only 18% of the ACTH treated group had radiological evidence of such deterioration.

W.F. West and G.R. Newns: "Treatment of Rheumatoid Arthritis by Prolonged Stimulation of the Adrenal Cortex" Lancet 268:578:1955

NORDIC BIOCHEMICALS LTD. 4324 ST. LAWRENCE BLVD., MTL.

Department of Health and Public Welfare Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1956		1955		Total	
	Jan. 27 to Feb. 23, '57	Jan. 1 to Jan. 26, '57	Jan. 29 to Feb. 26, '56	Jan. 1 to Jan. 28, '56	Jan. 1 to Feb. 23, '57	Jan. 1 to Feb. 26, '56
Anterior Poliomyelitis	0	2	1	0	2	1
Chickenpox	132	89	126	84	221	210
Diphtheria	3	5	0	0	8	0
Diarrhoea and Enteritis, under 1 year	19	0	15	4	19	19
Diphtheria Carriers	2	3	0	0	5	0
Dysentery—Amoebic	0	0	0	0	0	0
Dysentery—Bacillary	0	0	3	1	0	4
Erysipelas	1	0	1	3	1	4
Encephalitis	0	0	0	0	0	0
Influenza	3	0	14	5	3	19
Measles	555	236	256	138	791	394
Measles—German	23	9	36	5	32	41
Meningococcal Meningitis	1	0	1	1	1	2
Mumps	91	37	171	112	128	283
Ophthalmia Neonatorum	0	0	0	0	0	0
Pneumonia, Lobar	0	0	0	0	0	0
Puerperal Fever	0	0	1	0	0	1
Scarlet Fever	33	4	18	18	37	36
Septic Sore Throat	1	0	4	0	1	4
Smallpox	0	0	0	0	0	0
Tetanus	1	0	0	0	1	0
Trachoma	0	0	0	0	0	0
Tuberculosis	31	18	27	12	49	39
Typhoid Fever	1	0	0	0	1	0
Typhoid Paratyphoid	0	0	0	1	0	1
Typhoid Carriers	0	0	0	0	0	0
Undulant Fever	0	0	1	0	0	1
Whooping Cough	35	12	36	9	47	45
Gonorrhoea	61	64	106	99	125	205
Syphilis	10	5	7	3	15	10
Jaundice, Infectious	46	18	33	12	64	45

Four-Week Period, January 27 to February 23, 1957

DEATHS FROM REPORTABLE DISEASES

February, 1957

DISEASES (White Cases Only)	*850,000 Manitoba	*880,665 Saskatchewan	*5,404,533 Ontario	*2,952,000 Minnesota
*Approximate population				
Poliomyelitis	—	—	—	—
Chickenpox	132	3	2220	—
Diarrhoea & Enteritis, under 1 yr.	19	—	—	—
Diphtheria	3	—	6	12
Diphtheria Carriers	2	—	—	—
Dysentery—Amoebic	—	—	—	—
Dysentery—Bacillary	—	1	8	3
Encephalitis Epidemica	—	—	—	—
Erysipelas	1	—	1	—
Influenza	3	—	5	1
Jaundice, Infectious	46	75	39	32
Measles	555	69	2348	798
German Measles	23	—	193	—
Meningitis Meningococcal	1	—	3	5
Mumps	91	14	1290	—
Psittacosis	—	—	—	2
Pertussis	—	9	—	—
Puerperal Fever	—	—	—	—
Scarlet Fever	33	7	266	102
Septic Sore Throat	1	2	7	68
Smallpox	—	—	—	—
Tetanus	1	—	—	—
Trachoma	—	—	—	—
Tuberculosis	31	18	91	81
Typhoid Fever	1	—	9	2
Typh. Para-Typhoid	—	—	1	—
Typhoid Carrier	—	—	—	—
Undulant Fever	—	—	1	—
Whooping Cough	35	—	185	5
Gonorrhoea	61	—	138	—
Syphilis	10	—	34	—

Urban—Cancer, 55; Diarrhoea & Enteritis, 2; Pneumonia, Lobar (490), 2; Pneumonia (other forms), 16; Tuberculosis, 1. Other deaths under 1 year, 15. Other deaths over 1 year, 231. Stillbirths, 18. Total, 340.

Rural—Cancer, 21; Diarrhoea and Enteritis, 2; Pneumonia, Lobar (490), 3; Influenza, 1; Jaundice (infectious), 1; Meningitis (meningococcal, 1; Pneumonia (other forms), 8; Septicaemia & Pyaemia, 1; Tuberculosis, 8; Mumps, 1. Other deaths under 1 year, 14. Other deaths over 1 year, 123. Stillbirths, 4. Total, 168.

Indians—Pneumonia (other forms), 4. Other deaths over 1 year, 5. Stillbirths, 1. Total, 10.

Diphtheria is still with us and four more cases plus one carrier have been reported from the city of Winnipeg since these statistics.

Measles—More prevalent than at this time last year, particularly in the Greater Winnipeg area. Gamma globulin can be procured for children four years of age and under. Give 0.02 ccs per pound body weight for modification or 0.1 ccs per pound body weight for prevention.

Typhoid Fever—First case this year is in a three-year-old boy. The source of the disease was the boy's grandmother who had typhoid 47 years ago but as far as we know had no positive cultures until the present time. A good example of how B typhi can lie dormant in the gall bladder for years.

Infectious Hepatitis—More cases are being reported than last year but seems to be quietening down over the past two or three weeks.

Detailmen's Directory

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E.E.N.T. Specialist Required

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